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SIMILIA SIMILIBUS CURENTUR.

TRANSACTIONS

OF THE

THIRTY-FIFTH SESSION

OF THE

HOMŒOPATHIC MEDICAL SOCIETY

OF THE

STATE OF PENNSYLVANIA.

HELD AT PHILADELPHIA, SEPTEMBER 26, 27 AND 28, 1899.

PHILADELPHIA:
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1900.

OFFICERS.

1899.

President,	B. F. Betts, M.D.,	Philadelphia.
First Vice-President,	A. P. Bowie, M.D.,	Uniontown.
Second Vice-President,	Anna C. Clarke, M.D.,	Scranton.
Recording Secretary,	George B. Moreland, M.D.,	Pittsburg.
Corresponding Secretary,	Edward M. Gramm, M.D.,	1833 Chestnut Street, Philadelphia.
Treasurer,	J. F. Cooper, M.D. (deceased),	Allegheny.
Necrologist,	Thomas L. Bradford, M.D.,	Philadelphia.
Censors,	(3 yrs.) Thomas H. Carmichael, M.D.,	Philadelphia.
	(2 yrs.) J. W. Coolidge, M.D.,	Scranton.
	(1 yr.) Ella D. Goff, M.D.,	Allegheny.
Trustees,	(3 yrs.) B. F. Betts, M.D.,	Philadelphia.
	do. C. C. Rinehart, M.D.,	Pittsburg.
	do. W. H. Keim, M.D.,	Philadelphia.
	(2 yrs.) J. F. Cooper, M.D. (deceased),	Allegheny.
	do. Edward Cranch, M.D.,	Erie.
	do. W. W. Van Baun, M.D.,	Philadelphia.
	(1 yr.) Edward M. Gramm, M.D.,	Philadelphia.
	do. D. P. Maddux, M.D.,	Chester.
	do. Z. T. Miller, M.D.,	Pittsburg.

1900.

President,	C. C. Rinehart, M.D.,	Pittsburg.
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Corresponding Secretary,	Edward M. Gramm, M.D.,	1833 Chestnut Street, Philadelphia.

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Treasurer,		Ella D. Goff, M.D.,	Allegheny.
Necrologist,		Thomas L. Bradford, M.D.,	Philadelphia.
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	(1 yr.)	J. W. Coolidge, M.D.,	Scranton.
Trustees,	(3 yrs.)	D. P. Maddux, M.D.,	Chester.
	do.	Z. T. Miller, M.D.,	Pittsburg.
	do.	Edward M. Gramm, M.D.,	Philadelphia.
	(2 yrs.)	B. F. Betts, M.D.,	Philadelphia.
	do.	C. C. Rinehart, M.D.,	Pittsburg.
	do.	W. H. Keim, M.D.,	Philadelphia.
	(1 yr.)	I. B. Gilbert, M.D.,	Philadelphia.
	do.	Edward Cranch, M.D.,	Erie.
	do.	W. W. Van Baun, M.D.,	Philadelphia.

To the Homœopathic Medical Society of the State of Pennsylvania:

Your Committee on Publication herewith presents the Proceedings and Papers of the Thirty-fifth Session of the Society, held at Philadelphia, September 26, 27 and 28, 1899.

EDWARD M. GRAMM, M.D.,
GEORGE B. MORELAND, M.D.,
ELLA D. GOFF, M.D.

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TRANSACTIONS

OF THE

THIRTY-FIFTH SESSION

OF THE

HOMŒOPATHIC MEDICAL SOCIETY

OF THE

STATE OF PENNSYLVANIA.

Held at the Hahnemann Medical College, Philadelphia, September 26, 27 and 28, 1899.

The President, B. F. BETTS, M.D., of Philadelphia, called the meeting to order on the morning of September 26, 1899.

The invocation of Divine Providence was offered by Rev. Kerr Boyce Tupper, D.D., LL.D., of Philadelphia.

Hon. Samuel H. Ashbridge, Mayor of Philadelphia, greeted the members in the following

ADDRESS OF WELCOME.

Mr. President, Ladies and Gentlemen:

It is a pleasure for me to be here to welcome you. You have chosen wisely to come to Philadelphia and to come this year. Philadelphia is the Mecca of all people and places. It is the seat of government of a large municipality, one of the eight largest in the world; it is the seat of government of the beginning of our Republic, where all good things were done for the purpose of making us what we are to-day. It is not only full of tradition, it is full of interesting relics connected

with the events out of which sprung the liberty which our forefathers gave us. It is the greatest city on the American continent, because here are found the greatest patriotism, the most earnest loyalty and devotion; here are found the greatest number of public schools, of colleges, institutions and universities of learning, so that our people are not compelled to be satisfied with an ordinary education, but can receive instruction in the higher sciences and be fitted for the various professions.

It is the centre of medical education, and I doubt that all the rest of our American cities combined have as many medical students and turn out as many eminent medical practitioners as the city of Philadelphia. New York is a great metropolis —cosmopolitan, metropolitan, Bohemian, as it were, and its inhabitants are proud of the distinctive position it occupies in this country; but it is merely a landing-place for people who wish to come here. They have very few students of medicine compared with us.

In legal matters, too, we will not yield first place to any community. About a year ago some of the lawyers of New York State and city endeavored to handle a certain question before the Supreme Court of the United States at Washington; and, when the others failed, it was left for a man from the Philadelphia bar, John G. Johnson, who came from the lower rounds of the ladder, to win the case. So you see, people come to Philadelphia for all good things, whether in medicine or law. While we do not boast of our advanced position, we have it.

It is wise that you should meet in your annual conclaves for the purpose of interchanging your thoughts; it is beneficial to meet for a common purpose, for a common good, and also to cement fraternity and unanimity in the work in which you are all engaged—in the art of healing. We do not appreciate health until we lose it, and then we begin to look to our doctor, and he has to hold us in a few days on account of our having abused ourselves for many months and years. It is a hard matter to do to tell a sick man to be quiet and keep still and take the medicines; and, while you have your particular qualifications, particular lines of practice, and special methods of treatment,

other schools have other treatments and other methods; and personally I think I can say, without any offence to the other schools of practice, that you have been eminently successful in the practice of medicine and the art of healing in comparison with the other large schools of our city and of the country.

I thank you very much for coming to Philadelphia. We like all good people to come here. We like to open the doors of our homes and to extend the greatest hospitality to you; we like to open our hearts to you, that you may feel a gladsome welcome here in our midst, that when your sessions are over you may go from hence feeling that the welcome and hospitality that have been accorded, and the days that you may study here, have been fruitful of good things and beneficial to yourselves, not only individually, but in the community in which you practice. We welcome you to the hospitality of the city.

We do not want you to depart until you have seen our Exposition. That does not belong alone to Philadelphia. We are broad enough in character to say that, while it exists here, while it was conceived here, and while the great executive work has been done here, and we want it to be recognized as a Philadelphia enterprise, yet it is a great national enterprise; and not only that, but an international enterprise whose influence will go out to the civilized world, that the genius of Americanism as developed in this country, in its mechanism and science, may astonish the world, and bring to our city and country an interchange of the arts and sciences and manufactures and skill, and that there may be a comity between all the nations, so that there may be a bond following even in commerce and trade and manufactures, as well as in medicine. We therefore bid you go there and learn many things, for it may interest you in your profession. Men should be broad enough to look into the intricacies of all professions, and study the evolution of all good things that help to make great a nation and people, because it broadens the character immensely.

Again we extend to you a gladsome welcome, extending to you our hospitality; and may success be yours in future life, and may you return to your homes feeling that you have been in the greatest of all American cities, and that you have been

made better citizens and better Americans thereby. (Applause.)

Dr. B. F. Betts: Our First Vice-President, Dr. A. P. Bowie, of Uniontown, will respond.

Dr. A. P. Bowie: Your Honor's kind words of welcome ought to be responded to by one other than myself. I think it was some queer impulse of our President that prompted him to ask one who comes from far away to respond to those kind words of greeting, and I can assure you that we are all glad to come to Philadelphia. We are not strangers here, but pilgrims. We came here years ago to learn medicine. We came here to this medical Mecca as the one source from which we could obtain our medical education. You have exported and sent us out from your city, and now we return and learn things new and old. When yonder bell proclaimed liberty throughout this land, it meant not only civil and religious liberty, but it meant medical liberty as well. We represent the liberal mind of medicine. We have accomplished what no other school on this earth has accomplished. We have attained our position to-day by our results, and although we may not be as numerous and may not have as great an influence in legislative bodies as the other school, still our influence is felt, and we hope that this gathering here to-day will put us still nearer the goal for which we are striving—that will be reached when every doctor will be a homœopath, and when every patient will acknowledge our school of medicine. (Applause.) We are aiming for that; nothing else will suffice, and if we are true to ourselves and follow out our teachings, and keep in advance as we are doing now, we will attain it without any further effort, except what we make ourselves.

The Export Exposition here is something that Philadelphia ought to be proud of. It is something we expect to see, something that we expect to take in; but the main object of our visit here to-day is to become better doctors, and to influence this community for the good of our school of medicine. And, while I am speaking on this subject, let me say there is no greater need to-day in the State of Pennsylvania than for homœopathic doctors. We need them in the western part of our State where I live; you have too many of them in Philadel-

phia, and what you want to do is to scatter them more; then our State will grow and our school will grow. There is no question about this—we need you. We need all the doctors that this school of medicine here in Philadelphia can send out; we have places for them in our State, and we hope that every year you will send us more to fight the good fight which was started here years ago. Philadelphia is the home of homœopathy. Let this home send out her sons to cure the sick.

Again I thank you, Mr. Mayor, for the kind words of welcome which you have spoken to us.

Dr. B. F. Betts: The next order of business is the calling of the roll.

Dr. E. M. Gramm: I move that the calling of the roll be dispensed with. (Motion carried.)

There is one matter to which I would call your attention under the calling of the roll; it is the correction of the list of members. The majority of the members, if they move, do not send to the Corresponding Secretary a notification of such removal. In consequence their old addresses appear in many instances and should be corrected.

If, during the session, any member knows of a wrong address that appears in the last volume of the Transactions, or has himself removed, I would be very much obliged for a statement of that fact.

The Treasurer *pro tem.*, Dr. Ella D. Goff, presented the following:

REPORT OF THE TREASURER.

Received as dues from members, . .	$921 00	
Balance in hand at last report, . . .	140 94	
Balance in bank unaccounted for, . .	74 04	
Total, ...		$1135 98
Authorized bills paid since last report, as per vouchers, ...	$770 56	
One check not honored, ...	5 00	
Total, ...		775 56
Balance in bank due Society, . . .		$360 42

Respectfully submitted,

Ella D. Goff, M.D.,

Treasurer *pro tem.*

The report of the Treasurer was received and referred to an Auditing Committee, composed of Drs. C. S. Middleton, Z. T. Miller and E. M. Gramm, who presented the

REPORT OF THE AUDITING COMMITTEE.

PHILADELPHIA, September 26, 1899.

We, the undersigned Auditing Committee, have examined the Treasurer's books and find the accounts correct.

C. S. MIDDLETON, M.D.,
Z. T. MILLER, M.D.,
E. M. GRAMM, M.D.,
Auditing Committee.

REPORT OF THE CORRESPONDING SECRETARY.

The Corresponding Secretary reported that during the past year nothing of vital importance requiring report had occurred, but that the routine work of the office had been performed. He presented for approval the following program for the meeting, which was adopted:

PROGRAM.

ORDER OF BUSINESS.

Tuesday, September 26, 1899.

Morning Session, 9.30 *to* 1 *o'clock.*

1. Call to order.
2. Invocation.
3. Address of Welcome.
4. Response.
5. Roll Call. Correction of List of Members.
6. Report of Treasurer. Appointment of Auditing Committee.
7. Report of Corresponding Secretary.
8. Report of Trustees.
9. Report of Committees.
   a. Organization, Registration and Statistics. George B. Moreland, M.D., Chairman.

b. Legislation. H. C. Chisholm, M.D., Chairman.
c. Publication. Edward M. Gramm, M.D., Chairman.
d. Hahnemann Monument. W. J. Martin, M.D., Chairman.

10. Report of Delegates to the American Institute of Homœopathy.
11. Report of Delegates to the Delaware State Society.
12. Report of Delegates to the Inter-State Committee of the American Institute of Homœopathy.
13. Report of Delegates to the Maryland State Society.
14. Report of Delegates to the Massachusetts State Society.
15. Report of Delegates to the New Jersey State Society.
16. Report of Delegates to the New York State Society.
17. Report of Delegates to the Ohio State Society.
18. Report of Delegates to the Southern Institute of Homœopathy.
19. Report of Delegates to the West Virginia State Society.
20. Report of Delegates from State Societies and Local Organizations.
21. Report of Necrologist, Thomas L. Bradford, M.D.
22. Report of Auditing Committee.

Section of Surgery.

G. M. Christine, M.D., Chairman.

Associates.—L. T. Ashcraft, M.D.; J. C. Burgher, M.D.; J. W. Coolidge, M.D.; E. R. Gregg, M.D.; J. W. Hassler, M.D.; Malcolm Macfarlan, M.D.; D. P. Maddux, M.D.; H. L. Northrop, M.D.; R. C. Pitcairn, M.D.; S. M. Rinehart, M.D.; C. P. Seip, M.D.; W. G. Steele, M.D.; Walter Strong, M.D.; L. W. Thompson, M.D.; G. A. Van Lennep, M.D.; W. B. Van Lennep, M.D.; C. V. Vischer, M.D.; L. H. Willard, M.D.

G. M. Christine, M.D., Philadelphia. Address in Surgery.

L. T. Ashcraft, M.D., Philadelphia. The Treatment of Hypertrophy of the Prostate.

J. W. Coolidge, M.D., Scranton. Catheterization.

J. W. Hassler, M.D., Philadelphia. The Use of Intra-Venous Injections.

Malcolm Macfarlan, M.D., Philadelphia. Potentized Medicine in Septic Conditions.

H. L. Northrop, M.D., Philadelphia. Gastrostomy for Benign Stricture of the Œsophagus.

R. C. Pitcairn, M.D., Pittsburg. The Treatment of Surgical Shock.

S. M. Rinehart, M.D., Allegheny. Osteomyelitis.

W. G. Steele, M.D., Philadelphia. Orificial Surgery.

Walter Strong, M.D., Philadelphia. Some Unusual Abdominal Cases.

L. W. Thompson, M.D., Philadelphia. The Operative Treatment of Tetanus.

G. A. Van Lennep, M.D., Philadelphia. Wounds of the Abdomen; With Report of a Case.

W. B. Van Lennep, M.D., Philadelphia. The Surgery of the Liver and Gall-Bladder.

C. V. Vischer, M.D., Philadelphia Cholelithiasis.

Afternoon Session, 3 to 6 o'clock.

SECTION OF SANITARY SCIENCE.

A. P. Bowie, M.D., Chairman.

Associates.—A. M. Barnes, M.D.; J. F. Cooper, M.D. (deceased); Pemberton Dudley, M.D.; Silas Griffith, M.D.; J. H. Helfrich, M.D.; B. W. James, M.D.; F. W. Lange, M.D.; Duncan Macfarlan, M.D.; W. H. Malin, M.D.; B. R. Marsden, M.D.; Hugh Pitcairn, M.D.; Trimble Pratt, M.D.; J. P. Pursell, M.D.; J. M. Reeves, M.D.; D. W. Shoemaker, M.D.

A. P. Bowie, M.D., Uniontown. The Doctor's Vacation.

A. M. Barnes, M.D., Philadelphia. The Doctor's Horse, Carriage and Stable.

Silas Griffith, M.D., Philadelphia. The Sanitary Use of Water.

B. W. James, M.D., Philadelphia. Coast and Mountain Climates Compared.

Trimble Pratt, M.D., Media. The Care of the House Beautiful.

Section of Clinical Medicine.

F. W. Burlingame, M.D., Chairman.

Associates.—Clarence Bartlett, M.D.; W. D. Bayley, M.D.; Mary Branson, M.D.; T. H. Carmichael, M.D.; Millie J. Chapman, M.D.; J. H. Closson, M.D.; W. H. Cooper, M.D.; P. H. Ealer, M.D.; W. H. A. Fitz, M.D.; I. B. Gilbert, M.D.; W. C. Goodno, M.D.; L. B. Griffith, M.D.; W. M. Griffith, M.D.; O. S. Haines, M.D.; J. E. Harner, M.D.; J. R. Horner, M.D.; E. H. Kase, M.D.; E. C. Parsons, M.D.; L. P. Posey, M.D.; J. H. Reading, M.D.; Thomas Reading, M.D.; C. W. Roberts, M.D.; E. R. Snader, M.D.; R. E. Tomlin, M.D.; W. W. Van Baun, M.D.; Chandler Weaver, M.D.; M. D. Youngman, M.D.

F. W. Burlingame, M.D., McKeesport. The Relation of Homœopathy to Life Insurance.

Clarence Bartlett, M.D., Philadelphia. Some Points Connected with the Diagnosis of Renal Disorders.

Mary Branson, M.D., Philadelphia. Clinical Cases.

I. B. Gilbert, M.D., Philadelphia. Diphtheria.

L. B. Griffith, M.D., Philadelphia. Nutrition.

W. M. Griffith, M.D., Philadelphia. Rheumatism.

J. E. Harner, M.D., Reading. A Case of Tubercular Meningitis.

A. B. Lichtenwalner, M.D., Philadelphia. Rheumatism.

E. R. Snader, M.D., Philadelphia. One Factor of Failure in the Use of Drugs.

Evening Session, 8 to 10.30 o'clock.

Section of Clinical Medicine.

(*Continued.*)

R. E. Tomlin, M.D., Philadelphia. Sexuality: Why an Avoided Subject.

W. W. Van Baun, M.D., Philadelphia. Infant Feeding.

Chandler Weaver, M.D., Philadelphia. Paralysis of the Anus: A Peculiar Case.

The Saturday Night Club of Medical Microscopists. Philadelphia.

Demonstration of the Plasmodium Malariæ by Means of the Projection Lantern, by O. S. Haines, M.D., and D. B. James, M.D., Philadelphia.

J. C. Guernsey, M.D., Philadelphia. Can Homœopathy Cure Malaria?

Wednesday, September 27.

Morning Session, 9 *to* 12.30 *o'clock.*

SECTION OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

C. M. Thomas, M.D., Chairman.

Associates.—W. W. Blair, M.D.; H. B. Bryson, M.D.; John Cooper, M.D.; Peter Cooper, M.D.; H. K. Hoy, M.D.; H. I. Jessup, M.D.; C. H. Lee, M.D.; W. H. Lyle, M.D.; F. W. Messervè, M.D.; G. A. Mueller, M.D.; G. J. Palen, M.D.; H. F. Schantz, M.D.; I. G. Shallcross, M.D.; William Spencer, M.D.; G. W. Stewart, M.D.; H. B. Ware, M.D.; Flora E. Wasserman, M.D.; H. S. Weaver, M.D.

C. M. Thomas, M.D., Philadelphia. Osteoma of the Orbit.

W. W. Blair, M.D., Pittsburg. Foreign Body in Vitreous Located by X-Rays and Removed by Electro Magnet.

H. K. Hoy, M.D., Altoona. Nasal Practice.

H. I. Jessup, M.D., Philadelphia. Thrombosis of Cavernous Sinus.

G. J. Palen, M.D., Philadelphia. Typical and Atypical Retinitis Pigmentosa; Some Cases.

H. F. Schantz, M.D., Reading. Eye Diseases and Nasal Conditions.

I. G. Shallcross, M.D., Philadelphia. Sequelæ of Pharyngeal Adenoids.

G. W. Stewart, M.D., Philadelphia. The Methods of Securing Antisepsis in Corneal Operations.

H. S. Weaver, M. D., Philadelphia. Adenoids; With a Plea for their Early Removal.

Section of Obstetrics.

D. C. Kline, M.D., Chairman.

Associates.—A. W. Baily, M.D.; W. S. Bigelow, M.D.; C. F. Bingaman, M.D.; H. M. Bunting, M.D.; Isaac Crowther, M.D.; B. L. Davis, M.D.; W. F. Edmundson, M.D.; Ella D. Goff, M.D.; H. F. Heilner, M.D.; C. H. Hofmann, M.D.; W. D. King, M.D.; A. Korndœrfer, Jr., M.D.; J. B. McClelland, M.D.; Eliza L. McClure, M.D.; E. W. Mercer, M.D.; J. N. Mitchell, M.D.; G. B. Moreland, M.D.; Margaret H. Schantz, M.D.; F. R. Schmucker, M.D.; Julia Gould Waylan, M.D.

D. C. Kline, M.D., Reading. The Surgical Side of Obstetrics.

Isaac Crowther, M.D., Chester. Observations on the Use of Forceps.

A. Korndœrfer, Jr., M.D., Philadelphia. High Temperature After Labor.

E. W. Mercer, M.D., Philadelphia. The Temperature of the Puerperium.

J. N. Mitchell, M.D., Philadelphia. Management of Vertex Presentations.

Margaret H. Schantz, M.D., Reading. Care of the Woman During Pregnancy.

F. R. Schmucker, M.D., Reading. Breech Presentations.

Julia Gould Waylan, M.D., Philadelphia. Hyperemesis During Labor; A Case.

Afternoon Session, 2 to 5 o'clock.

Section of Materia Medica.

C. S. Schwenk, M.D., Chairman.

Associates.—J. P. Birch, M.D.; J. D. Boileau, M.D.; Mary A. Cooke, M.D.; Edward Cranch, M.D.; J. C. M. Drake, M.D.; W. K. Detwiller, M.D.; W. G. Dietz, M.D.; P. S. Duff, M.D.; T. S. Dunning, M.D.; D. P. Gerberich, M.D.; G. H. Haas, M.D.; J. G. Keelor, M.D.; C. B. Knerr, M.D.; A. Korndœrfer, Sr., M.D.; R. P. Mercer, M.D.; C. S. Middleton, M.D.; Charles Mohr, M.D.; G. W. Parker, M.D.; Eliza F. Pettingill, M.D.; W. A.

Seibert, M.D.; F. J. Slough, M.D.; G. W. Smith, M.D.; J. W. Thatcher, M. D.; R. T. White, M.D.

C. S. Schwenk, M.D., Philadelphia. Cuprum.

Mary A. Cooke, M.D., Philadelphia. A Comparison of Natrum mur., Pulsatilla and Sepia.

P. S. Duff, M.D., Great Belt. Podophyllum Peltatum.

A. Korndœrfer, Sr., M.D., Philadelphia. A Comparison of Cyclamen, Pulsatilla and Rhus.

C. S. Middleton, M.D., Philadelphia. Aconite: A Neglected Remedy in Cardiac Paralysis.

Charles Mohr, M.D., Philadelphia. The Need of a Standard Pharmacopœia.

W. A. Seibert, M.D., Easton. Mental Characteristics Tabulated for Study.

G. W. Smith, M.D., Philadelphia. Hints on Studying Materia Medica.

R. T. White, M.D., Allegheny. Strophanthus.

Thursday, September 28.

Morning Session, 9.30 *to* 1 *o'clock.*

SECTION OF GYNÆCOLOGY.

J. H. McClelland, M.D., Chairman.

Associates.—B. F. Betts, M.D.; T. M. Bulick, M.D.; J. A. Bullard, M.D.; W. D. Carter, M.D.; Sarah J. Coe, M.D.; T. J. Gramm, M.D.; Joseph Hancock, M.D.; J. E. James, M.D.; Alfred Layman, M.D.; J. W. Leckie, M.D.; A. A. Lindabury, M.D.; Anna M. Marshall, M.D.; R. S. Marshall, M.D.; W. J. Martin, M.D.; L. W. Reading, M.D.; Emma T. Schreiner, M.D.; I. G. Smedley, M.D.; Pearl Starr, M.D.; J. H. Thompson, M.D.

D. J. Baker, M.D., Philadelphia. A Plea for the Exploratory Abdominal Incision.

B. F. Betts, M.D., Philadelphia. The Medical Treatment of Gynæcological Cases.

T. M. Bulick, M.D., Harrisburg. A Plea for a Closer Study of Remedies in Uterine Troubles.

T. J. Gramm, M.D., Philadelphia. The Vaginal Secretion and Auto-Infection.

Joseph Hancock, M.D., Philadelphia. Pelvic Hæmatocele.

Pearl Starr, M.D., Bellevue. Chronic Endometritis.

J. H. Thompson, M.D., Pittsburg. Conservative Operations on the Tubes and Ovaries.

Section of Pathology and Pathological Anatomy.

W. K. Ingersoll, M.D., Chairman.

Associates.—Francis Boyer, M.D.; J. C. Guernsey, M.D.; P. S. Hall, M.D.; A. C. Heritage, M.D.; M. J. Holben, M.D.; T. M. Johnson, M.D.; A. L. Kistler, M.D.; A. B. Lichtenwalner, M.D.; H. K. Mansfield, M.D.; C. R. Norton, M.D.; J. R. Phillips, M.D.; C. S. Raue, M.D.; E. H. Van Deusen, M.D.; J. D. Ward, M.D.

W. K. Ingersoll, M.D., Philadelphia. Pathology and Homœopathy.

W. D. Carter, M.D., Philadelphia. Tetanus; Report of a Case with Recovery.

E. M. Gramm, M.D., Philadelphia. A Contribution to the Pathology of Rosacea.

E. H. Van Deusen, M.D., Philadelphia. The Pathology of Myopathic Paralyses.

Afternoon Session, 2 to 5 o'clock.

Section of Pædology.

Anna C. Clarke, M.D., Chairman.

Associates.—W. H. Bigler, M.D.; B. F. Books, M.D.; F. D. Brewster, M.D.; W. K. Brown, M.D.; H. W. Fulton, M.D.; T. P. Gittens, M.D.; E. H. Hill, M.D.; C. W. Perkins, M.D.; Martha H. Pollock, M.D.; W. E. Rotzell, M.D.; J. H. Sandel, M.D.; Mary Shepherd, M.D.; C. D. Smedley, M.D.; Mary E. Smith, M.D.; T. M. Sureth, M.D.; M. S. Williamson, M.D.; C. A. Yocum, M.D.

Anna C. Clarke, M.D., Scranton. Bronchitis.

W. H. Bigler, M.D., Philadelphia. Some Peculiarities of the Respiratory Organs in Infancy and Childhood.

Final Report of the Board of Censors.
Conclusion of Reports and Discussions.
Unfinished Business.
New Business.
Election of Officers.
Selection of Place for the Next Meeting.
Appointment of Committees.
Announcement of Sections.
Adjournment.

REPORT OF THE BOARD OF TRUSTEES.

Your Board of Trustees would report that the Society is probably in the most flourishing condition that it has enjoyed since its organization. Its financial status is excellent, there being a balance of $360.42 in the treasury after all obligations incurred since the last meeting have been paid. A number of applications for membership have been presented and, no doubt, more will follow during this session.

As is known to the members, our faithful Treasurer has gone to his reward since last we met. In order to have the finances of the Society collected and managed up to the election of his successor, the President appointed Dr. Ella D. Goff Treasurer *pro tem.*

Dr. W. H. Keim has been appointed by the Board to draft proposed amendments to the By-laws, so as to enable the Trustees to better manage the financial affairs of the Society.

On motion, the report was adopted and the action of the President unanimously endorsed.

REPORT OF THE COMMITTEE ON ORGANIZATION, REGISTRATION AND STATISTICS.

To the Homœopathic Medical Society of the State of Pennsylvania:

Your Committee on Organization, Registration and Statistics herewith presents its annual report for publication. Twenty-nine local societies have returned reports to your committee,

and the number of members in each, with their officers and times and places of meeting, will be found in detailed report to be printed.

Eleven hospitals and six dispensaries are included in the report, and are shown to have made a gratifying increase in their work over last year.

The Beaver Valley General Hospital, which is reported for the first time, has a staff of sixteen, equally divided between the Allopathic and Homœopathic Schools.

We desire, through the medium of this report, to thank all who have answered our requests for data.

Respectfully submitted,

GEO. B. MORELAND, M.D.,
Chairman.

HOMŒOPATHIC DISPENSARIES

Name.	Location.	Executive Officer or Secretary.
Homœopathic Free Dispensary.	Pittsburg.	W. D. Slack, Sup't.
Hahnemann Hospital Dispensary.	Philadelphia.	Wm. G. Foulke, Sec.
Children's Homœopathic Dispensary.	Philadelphia.	N. F. Lane, M.D.
St. Luke's Homœopathic Dispensary.	Philadelphia.	John M. Zook.
Dispensary of Medical, Surgical and Maternity Hospital of Women's Homœopathic Association of Penna.	Philadelphia, 20th and Susquehanna.	Mrs. R. T. Mason.
Philadelphia Post-Graduate School Dispensary.	Philadelphia.	Wm. F. Kaercher, M.D.

HOMŒOPATHIC HOSPITALS AND INFIRMARIES

Name.	Location.	Executive Officer or Secretary.	When Incorporated.	When Opened to Patients.	No. of Beds.
Medical, Surgical and Maternity Hospitals of the Women's Hom. Association of Penna.	Philada	Mrs. M. T. Keehmle, 1315 Arch St.	1882	1884	75
Home for the Aged Poor.	Pittsburg.	Mother Superior.	1874	1884	152
Children's Homœopathic Hospital of Philadelphia.	Philada.	N. F. Lane, M.D.	1877	1877	65
Homœopathic Medical and Surgical Hospital of Pittsburg.	Pittsburg.	W. D. Slack, Supt.	1866	1866	160
Hahnemann Medical College Hospital.	Philada.	W. G. Foulke.	1869	1871	200
Hahnemann Hospital.	Scranton.	Mrs. H. M. Boies.	1897	1897	30
St. Luke's Homœopathic Hospital of Philadelphia.	Philada.	A. M. Barnes, M.D.	1896	1896	15
Benedictine Infirmary.	Erie.	Benedictine Sisters.	...	1851	10
Beaver Valley General Hospital (staff equally divided between Homœopaths and Allopaths).	New Brighton.	Jas. F. Merriman.	1894	1895	...
Reading Homœopathic Hospital.	Reading.	L. A. Schollerberger, M.D.	1890	1891	20
Women's Southern Homœopathic Hospital of Philada.	Philada.	Annie M. Miller.	1896	1896	30

OF THE STATE OF PENNSYLVANIA.

Incorporated.	Opened to Patients.	No. of New Patients Last Year.	No. of Patients Treated Last Year.	No. of Prescriptions Last Year.	No. Visits to Out-Door Patients.
1866	1866	10,384	19,464	13,420	...
1848	1848	27,871	28,433	106,768	1450
1877	1877	.....	35,287	27,466	2924
1896	1896	.....	2,755	7,373	...
1882	1884	2,986	4,556	12,682	4845
1891	1891	1,601	13,148	25,000	4142

OF THE STATE OF PENNSYLVANIA.

No. of Patients Treated Last Year.	Cured.	Relieved.	Not Relieved.	Died.	Estimated Value of Hospital and Grounds.	Amount of Productive Property.	Sources of Income.
587	454	33	16	34	$200,000.00	$65,000.00	Donations. State aid.
80	38	20	4	15	150,000.00	.....	Donations.
145	89	24	...	5	165,000.00	.....	Donations. State aid.
1880	1280	329	65	120	271,073.00	.....	Donations. State aid.
1921	1379	176	30	83	722,907.00	230,592.00	Donations. State aid.
150	96	43	3	9	.....	.....	Contributions.
301	...	...	...	32	10,000.00	.....	Contributions.
176	124	32	2	0	.....	.....	Donations.
202	147	16	6	19	.....	.....	Donations. State aid.
...	...	...	...	...	.....	.....	.....
...	...	...	...	...	.....	.....	.....

HOMŒOPATHIC MEDICAL SOCIETIES

Name.	President.	Secretary.
Lehigh Valley Homœo. Medical Society.	F. A. Garis, M.D., Bethlehem.	D. W. Straub, M.D., Bethlehem.
Hom. Medical Society of Northeastern Penna.	J. A. Bullard, M.D., Wilkesbarre.	Anna C. Clarke, M.D., Scranton.
Hom. Medical Society of Chester, Delaware and Montgomery Counties.	Franklin Powell, M.D., Chester.	Isaac Crowther, M.D., Chester.
Hom. Medical Society of Philadelphia County.	Edward W. Mercer, M.D., Philadelphia.	Weston D. Bayley, M.D., Philadelphia.
Hom. Medical Society of Allegheny County.	G. A. Mueller, M.D., Pittsburg.	Geo. B. Moreland, M.D., Pittsburg.
Hom. Med. Society of the 23d Ward, Philada.	D. W. Bartine, M.D., Fox Chase.	Chas. Becker, M.D., Philadelphia.
Hom. Med. Soc. of Central Pennsylvania.	E. H. Morrow, M.D., Altoona.	M. A. Wesner, M.D., Johnstown.
Hom. Medical Society of Schuylkill County.	W. G. Dietz, M.D., Hazleton.	L. A. Snyder, M.D., Ashland.
Alumni Association of Hahn. Med. College.	H. C. Chisholm, M.D., Huntingdon.	W. D. Carter, M.D., Philadelphia.
Hom. Medical Society of Beaver County.	Homer Bryan, M.D., Beaver Falls.	Wm. Raymer, M.D., Beaver Falls.
Homœopathic Med. Soc. of Germantown.	Louis P. Posey, M.D., Philadelphia.	J. H. Closson, M.D., Philadelphia.
Hahnemann Club of Philadelphia.	Pemberton Dudley, M.D., Philadelphia.	Thos. S. Dunning, M.D., Philadelphia.
Trousseau Clinical Club of Philadelphia.	H. S. Weaver, M.D., Philadelphia.	W. A. Weaver, M.D., Philadelphia.
Oxford Medical Club of Philadelphia.	W. G. Steele, M.D., Philadelphia.	G. W. Smith, M.D., Philadelphia.
Hahnemann Association of Western Penna.	Mr. D. G. Stewart, Pittsburg.	J. H. McClelland, M.D., Pittsburg.
Women's Hom. Medical Club of Philada.	Eliza L. McClure, M.D., Philadelphia.	Lydia W. Stokes, M.D., Philadelphia.
Bœnninghausen Medical Club of Philada.	Jos. Hancock, M.D., Philadelphia.	Geo. W. Smith, M.D., Philadelphia.
Hom. Practitioners' Association of Reading.	W. F. Marks, M.D., 402 N. 5th St.	F. W. Seidel, M.D., Reading.
A. R. Thomas Club of Philadelphia.	T. H. Carmichael, M.D., Philadelphia.	A. A. Norris, M.D., Philadelphia.
Saturday Night Club of Microscopists.	J. C. Guernsey, M.D., Philadelphia.	Nathan Smilie, M.D., Philadelphia.
Philadelphia Clinical Society.	C. M. Thomas, M.D., Philadelphia.	Wm. H. Bigler, M.D., Philadelphia.
Philada. Medical Club.	Clarence Bartlett, M.D., Philadelphia.	E. H. VanDeusen, M.D., Philadelphia.
East End Doctors' Club of Pittsburg.	J. H McClelland, M.D, Pittsburg.	R. C. Pitcairn, M.D., Pittsburg.
Hom. Pharmaceutical Association of Penna.	F. J. Slough, M.D., Allentown.	E. P. Anshutz, M.D., Philadelphia.
Pharmacological Society of the Hahn. Medical College of Phila.	Chas. Mohr, M.D., Philadelphia.	Chas. A. Ayres, M.D., Philadelphia.
Hom. Medical Society of Montgomery County.	E. B. Rossiter, M.D., Pottstown.	H. M. Bunting, M.D., Norristown.
Hom. Medical Society of Delaware County.	R. P. Mercer, M.D., Chester.	Geo. C. Webster, M.D., Chester.
Hom. Medical Society of Chester Co.	Hamilton Graham, M.D., Kennett Square	L. Hoopes, M.D., West Chester.
Hom. Medical Society of Luzerne Co.	D. S. Kistler, M.D., Wilkesbarre.	J. A. Brooke, M.D., Wilkesbarre.

OF THE STATE OF PENNSYLVANIA.

Organized.	Incorporated	When Meetings are held.	Where Meetings are held.	No. Members.	No. Admitted Last Year	No. Deceased Last Year	Annual Dues.
1881	Not.	Bi-Monthly.	No stated place.	31	2	0	$1.00
1887	"	"	Scranton and Wilkesbarre.	30	2	0	2.00
1858	"	"	No stated place.	65	18	2	1.00
1866	"	Monthly.	Hahn. Med. College.	140	10	2	1.00
1864	"	"	Hospital Chapel.	74	2	2	2.00
1881	"	"	Members' Residences.	26	0	0	1.50
1893	"	May and November.	No stated place.	28	0	0	2.00
1883	"	Quarterly.	No stated place.	21	2	0	1.00
1851	"	Annually.	Philada.	1319	76	9	.....
1883	"	Monthly.	Members' Residences.	14	1	0	1.00
1877	"	"	No stated place.	175	...	0	.....
1872	"	"	Members' Residences.	11	0	1	.....
1895	"	"	Members' Residences.	15	1	1	2.00
1885	"	"	Members' Residences.	16	0	0	2.00
1896	"	Annually.	No stated place.	200	0	0	2.00
1883	"	Monthly.	No stated place.	13	0	0	.....
1877	"	"	Secretary's Office.	9	0	0	2.00
1896	"	"	.....	16	2	0	1.00
1888	"	"	No stated place.	23	0	0	.....
1894	"	"	Hahn. Med. College.	45	8	0	1.00
1880	"	"	No stated place.	10	0	0	.....
1880	"	"	No stated place.	14	0	0	.....
1895	"	"	No stated place.	18	1	0	1.00
1881	1881	At call of President.	Philada.	13	0	0	.....
1895	Not.	Monthly.	Hahn. Med. College.	25	5	0	2.00
1898	"	Bi-Monthly.	No stated place.	18	2	0	1.00
1898	"	Quarterly.	No stated place.	20	3	0	1.00
1898	"	"	No stated place.	16	...	1	1.00
1899	"	Monthly.	No stated place.	14	...	0	.....

HOMŒOPATHIC MEDICAL JOURNALS OF THE STATE OF PENNSYLVANIA.

Name.	Editors and Publishers, and Place of Publication.	When Established.	Pages in each Number.	Subscription Price.	How often Published.	Form.
Hahnemannian Monthly.	W. W. Van Baun, M.D., 1402 Spruce St., Phila.	1865	96 Total 138	$3.00	Monthly.	Octavo.
Homœopathic Envoy.	E. P. Anshutz, P. O. Box 921, Phila.	1890	8	.25	Monthly.	Quarto.
Homœopathic Recorder.	E. P. Anshutz, P. O. Box 921, Phila. Boericke & Tafel, 1011 Arch St., Phila.	1886	48	1.00	Monthly.	Octavo.
The Homœopathic Physician.	Walter M. James, M.D., 1231 Locust St., Phila.	1881	48	2.50	Monthly.	Octavo.
Hospital News.	Verner S. Gaggin, M.D., Hom. Hosp., Pittsburg. Roy C. Pitcairn, M.D., Pittsburg, Pa. Homœopathic Hospital, Pittsburg, Pa.	1896	8	.10	Monthly.	.....
Hahnemannian Institute.	Students Hahnemann.	1893	16	.50	Monthly during Col. Term.	Quarto.

REPORT OF THE COMMITTEE ON LEGISLATION.

Dr. Edward M. Gramm: *Mr. President*—I received a telegram from Dr. Chisholm, Chairman of the Committee on Legislation, asking that a report be made in behalf of that committee. Dr. Closson, Secretary of the Committee, is not here, so I would like to say that during the past winter the Legislative Committee has been endeavoring to further the interests of homœopathy in this State, and particularly to secure a hospital for the insane, to be under homœopathic management. In furtherance of that idea, members of the Legislature were communicated with. The physicians of the State were importuned to give their influence in securing this hospital, and trips were made to Harrisburg to see what could be done to push the bill through. The endeavor to put this bill through for the establishment of a hospital for the insane failed, the bill passing the House of Representatives, but not passing or coming up, in fact, in the Senate, for the reason that Governor Stone had ordered the Committee on Appropriations not to pass any appropriations for new institutions. We are assured, however, and we feel that the assurance is an honest one, that the next insane hospital erected in the State of Pennsylvania will be a homœopathic one. Now, while the assurance came from influential members, at the same time it must be borne in mind that we must make other endeavors: that when the Legislature meets in 1901 there will need to be united effort to push the bill through, for it will be presented, and the Committee on Legislation will be the parties to see that it is presented, and will endeavor to do its utmost to have it passed; but the Committee on Legislation is but a small body, and it requires the profession behind it to put this bill through. The sending out of notices to the profession, as a rule, is followed by very few results. Very few men go to Harrisburg, very few men write to their Representatives, and very few endeavor to get any political influence to assist those who are endeavoring to put the bills through, which is wrong. Now, as this body stands for the profession in Pennsylvania, it should represent the sentiment of the profession; and it is a crying shame that all en-

deavors to enlist the profession in Pennsylvania, although it is nearly eleven hundred strong, fail, or at least fail to present such effect as should be produced. The burden falls on the few, and on that few each time, and I think that the members who hear the report should take that thought home with them, and when they get a call from the Legislative Committee asking for assistance, they should give that assistance, not necessarily a monetary one. Money is needed for a project of this character, but assistance by their presence in Harrisburg, the assistance of their voice with the Senators and Representatives in the State, is what is desired.

The notices that were sent out to the profession entailed an expense of thirty dollars, and the bill has not been paid; it is endorsed by Dr. Chisholm, Chairman of the Committee, and Dr. Closson, Secretary of the Committee; I, therefore, Mr. President, move that an order be drawn on the Treasurer for thirty dollars to pay the expenses incurred.

On motion, the report of the committee was accepted and the bill for thirty dollars directed to be paid.

REPORT OF THE COMMITTEE ON HAHNEMANN MONUMENT.

The committee, which President Keim in his wisdom made a very large one, consisting of forty-five members, was called together for organization in Pittsburg some short time after our last State Society meeting. Notice was sent to every member, giving time and place of meeting. Quite a number were present, and of those not present many sent letters of regret and encouragement, expressing a desire to do all in their power for the object for which the committee had been appointed. At this meeting an organization was effected by Dr. J. H. McClelland agreeing to act as Secretary, and Dr. C. F. Bingaman, Treasurer.

A plan of work was decided upon, consisting of an active canvass of the whole State for subscriptions. In each county one or several members of our school of practice were appointed, if not already members of the committee, to act in conjunction therewith. These were furnished subscription-

books containing the names and amounts of all that had to that time been subscribed in this State. Along with this book was some "campaign literature," consisting of a circular letter explaining the plan of work and the need of every effort being put forth in the cause of raising the needed funds; also a pamphlet containing a complete history and description of the monument, and a brief but very comprehensive "Sketch of Hahnemann." These were sent, one or more of them, into every county in the State. With very few exceptions the parties to whom the subscription-books were sent went to work with commendable zeal, contributing themselves what they could, and calling upon and presenting the book to their fellow-practitioners, and doing all they could.

Some few of the books were returned, some with a good excuse and some with a poor one. In Philadelphia here, one of your men, a most worthy son of a most worthy sire, was sent a book, which he returned, saying he could not ask people for money, though willing to give liberally himself. His conscience must have troubled him; he must have been unable to sleep at night after returning that book without trying to do anything—for after a while he sent a request that it be returned to him, as he was going to get some subscriptions, and he did; and I think he has more in sight.

The result of our campaign is not as great as we hoped, but better than nothing, and we will keep up the good work.

W. J. Martin, M.D.,
Chairman.

Dr. B. F. Betts, delegate from the Children's Homœopathic Hospital, presented the following:

REPORT OF THE CHILDREN'S HOMŒOPATHIC HOSPITAL.

During the past year the Children's Homœopathic Hospital of Philadelphia has established itself in its new and commodious building on Franklin Street north of Girard Avenue, on an extensive plot of ground extending from Franklin Street west to Eighth Street, and bounded by Thompson Street on

the north. The old property on Broad Street near Girard Avenue has been sold. The buildings which have accommodated this institution since the 14th of March, 1883, have long been considered inadequate. The new buildings are located in a well-improved section of the city, but one heretofore poorly supplied with hospital facilities. It is convenient to all parts of the city by trolley and steam railroad lines.

In the erection of a fire-proof building, equipped with every modern convenience, every facility has been secured for the most complete care and treatment of sick or crippled children. Private rooms, private wards and public wards are provided. Accident and emergency cases are received at all hours. Last year more than 40,000 cases were prescribed for in the Out-Patient Department alone. A training-school for nurses is in successful operation.

The Colonial style of architecture adopted in the erection of the central building, now in use, lends itself with good effect to the erection of additional structures to the north and south along the Franklin Street front. Beautiful as this building is, nothing has been sacrificed for the sake of ornamentation. The present buildings have cost over $75,000. The hospital is provided with two operating-rooms, steam heat, electric lights, a well-equipped laundry, and a magnificent roof-garden over all.

To the untiring energy of the President, Rev. C. R. Blackhall, the success of this enterprise is due, although his efficient efforts have been most magnanimously seconded by a very effective Board of Directors.

REPORT OF THE NECROLOGIST.

Frank Walter Brierly, M.D., was born at Beaver Falls, near Pittsburg, Pa., April 13, 1870. Died June 17, 1899, æt. 29 years. He was the son of Fitzroy Kendrick Brierly, a prominent lumber merchant of that place. He was educated at Geneva College, receiving the degree of B.S. He matriculated at Hahnemann Medical College of Philadelphia, 1891, graduating therefrom in 1894. For eighteen months following his graduation he was resident physician at the Metropolitan Hospital, Blackwell's Island, N. Y.

In 1896 he returned to Philadelphia and became attached to Hahnemann College of Philadelphia, his Alma Mater, as Demonstrator of Surgery and as Clinical Instructor in Surgery. He was greatly esteemed as a teacher, and he was a sure and skillful operator, and himself a constant student. Although so young he had built up an excellent practice, and he bade fair to make for himself a name in his specialty of surgery in the future.

To the homœopathic profession of Philadelphia, and especially to his associates at the College, it was a very great shock when it was announced "Dr. Brierly is dead." To those who had seen him but a day before, seemingly in health and attending to his professional duties, it was hardly to be credited. Dr. Brierly was at his post in the surgical department of the Dispensary on Friday afternoon, June 16th, and became afflicted with pains in the abdomen, in spite of which he attended to his work. On the way home he told his companion that he believed he was going to have appendicitis. Upon his return to his home he became very ill. Physicians were at once summoned and the case diagnosed as acute appendicitis. On Saturday morning he was removed to the Hahnemann Hospital where an operation was performed. It was then discovered that a gangrenous and tuberculous condition existed, and that there was no hope of recovery. Death ensued during the evening, a little over twenty-four hours after the attack was manifest.

He joined the State Homœopathic Society in 1895. He became a member of the Philadelphia County Homœopathic Medical Society in 1896. He was also a member of the Trousseau Clinical Club of Philadelphia, the Germantown Medical Club, the Saturday Night Club of Microscopists, and was Provisional Secretary of the Hahnemann Alumni Association. He was an active member of the editorial staff of the *Hahnemannian Monthly*, the Department of Surgery being in his charge.

Two years ago he was married to Harriet Louise Hargrave, daughter of the late Manager Hargrave of the Associated Press. He was the author of a number of pamphlets on surgery, and he was to have furnished a paper on a surgical subject at the meeting of the American Institute of Homœopathy in Atlantic City, which occurred but a few days after his death.

The funeral services were held at his home on the evening of Monday, June 19, 1899, and the remains were taken to his father's home at New Brighton, Pa., where the interment took place on Tuesday, June 20th. With a brilliant mind, a fine education, with every equipment for a notable professional life, with a rapidly increasing reputation as a surgeon, with a happy home, endeared by his kindliness to his fellows, such a sudden death seemed a cruel thing.

"The pity of it, the pity, to die just when about to live."

The following resolutions were passed by the Faculty of the Hahnemann Medical College:

WHEREAS, An All-wise and Inscrutable Providence has called from our midst F. Walter Brierly, M.D., Demonstrator of Surgery and Clinical Instructor in Surgery in this Institution:

Therefore, The Faculty of Hahnemann Medical College and Hospital of Philadelphia hereby expresses profound regret and sorrow in view of the loss of a teacher and colleague who gave so much promise of large usefulness in his profession, both as a practitioner and as an instructor.

We tender our heartfelt sympathy to his family and friends in their bereavement.

(Signed) P. DUDLEY, M.D.,
Dean.
C. MOHR, M.D.,
Registrar.

John F. Cooper, M.D.—Dr. John F. Cooper was born in East Liverpool, Columbiana County, Ohio, September 25, 1822. He lived there until the age of thirteen, at which time he entered an Ohio college, where he received his education. From thence he entered the Homœopathic Medical College of Pennsylvania, matriculating in the session of 1850–51, and graduating in the spring of 1853. Settling in Allegheny City, he commenced practice with Dr. C. Bayer, who had been his preceptor, continuing with him until April, 1855. He then established himself in business in Allegheny, so continuing until April 1, 1862, when he became associated for several years with Dr. M. W.

Wallace, formerly his student. He was married April 4, 1844, to Miss Sarah Johnson. She died March 10, 1897.

Dr. Cooper was one of the best known and respected of the members of our Society. Joining in 1865, at its organization, he greatly assisted in its growth and prosperity. He was elected President at the February meeting, 1873. He was elected Treasurer at the meeting in Philadelphia, October, 1874, an office which he held continuously for twenty-five years until his death. He was one of the founders of the Allegheny County Homœopathic Society, and its President in 1872 and 1882, was interested in the Pittsburg Homœopathic Hospital from its commencement, and was a corporator and a member of the Board of Trustees and a consulting physician.

He was an organizer of the Anatomical Society of the Allegheny County Homœopathic Medical Society, and its President in 1879 and 1893. He was a member of the Materia Medica Club of Allegheny County, and in 1875 arranged the *Prover's Record* of the proving of arsenite of soda, which was published in 1876 in book form.

He joined the American Institute of Homœopathy in 1866 and was a Senior of that body.

Upon the appointment of the Homœopathic Board of Medical Examiners of Pennsylvania in 1895 Dr. Cooper became a member, and was present at all the meetings, attending the last one in Philadelphia in June of this year. He was an extensive contributor to the journals of our school.

There was no better known physician in the twin cities of Pittsburg and Allegheny than Dr. Cooper. In his early years of practice he was greatly interested in political matters, and was a hard worker in the cause of reform and betterment of the condition of his city. The *Pittsburg Press* thus mentions him: "In Dr. Cooper's death Allegheny loses one of its most eminent physicians and prominent citizens. He was very wealthy and regarded as a philanthropist." The *Pittsburg Dispatch* says: "There was probably no physician in the two cities who was more widely known than Dr. Cooper. There was none in any school of the medical profession that stood higher or was more greatly esteemed. In the homœopathic

branch he was recognized as a leading light, not only in the community where he practiced, but throughout the State and country."

He left six sons, Philip, Henry, William, George, Sidney and Dr. John Cooper. All are professional men and well known.

His passing was beautiful; God reclaimed his soul while he was at prayer. Dr. Goff thus writes of his illness and death: "Your favor requesting the particulars of the death and burial-services of our dear friend Dr. J. F. Cooper received. I have been trying to write something that would give just the slightest impression of his beautiful life and death, but words and thoughts fail. I only know and realize that he took his departure quietly and peacefully, as he did everything, and the loss is ours.

"He had not been well since the 12th of December last. He had a severe attack of grippe, with hæmorrhage from the kidneys, and although not able to leave the house, he was in the office every day and attended to a large office practice. He gradually rallied and seemed to regain his usual strength, and was able to attend to the outdoor patients. In June he went to Philadelphia to the meeting of the Examining Board, and also to the Institute meeting at Atlantic City. While there he contracted a cold and received a fall which brought on the hæmorrhage and renewed the grippe symptoms. He still attended to business until the 8th of July, when he had a chill, and was confined to his room and bed for a few days. He then came into the office again; but on Saturday, July 15th, he had a severe attack of angina pectoris, and a week later another, not so severe. He kept his room until the 1st of August, when he again came to the office and took up his work, and seemed to steadily but slowly regain strength. On Friday, August 18th, the doctor seemed stronger and in better spirits than he had been since last September. He talked of the State Society meeting, and spoke of his plans for attending it. I left him about 3 P.M., with all arrangements made for going to Philadelphia on the 25th of September, his 77th birthday.

"After 3 o'clock he made several calls, finished up the work of the day, and arranged Saturday's work. He died as he desired—in the harness."

On Saturday, August 19th, Dr. Goff called for the purpose of visiting some patients with the doctor. She was told that he had not yet come downstairs, and fearing something was wrong she went to his room and knocked, but receiving no answer, entered. Dr. Cooper was kneeling beside the bed, his head bowed apparently in prayer, so she quietly left the room. But something in his appearance disquieted her, and she returned and found that he was dead. His face was livid and his hands clutched the bedspread, and it was evident from his posture that he had spent the last painful moments in life in prayer. He had been dead for some time. Doubtless at the last he was seized with an attack of the angina pectoris.

He remained in his office the evening of the 18th until 11 o'clock, when he retired to his room. His sons found him in good health when they bade him good-night at midnight.

Since September, 1891, Dr. Ella D. Goff had been associated as his assistant with Dr. Cooper, and she had attended the meetings of the State Society with him since 1889.

The funeral services were held in the First M. E. Church, Union Ave., Allegheny, on Tuesday morning, August 22, 1899, at half-past ten o'clock. The floral emblems were very beautiful, among which was "Gates Ajar," a design from his Sunday-school class, which he had taught for seventeen years, seldom missing a Sunday. He was buried in the Uniondale Cemetery of Allegheny.

Of the gentle, kindly friend who for so many years met with us we may say, in the beautiful words of Emerson, "Sooner or later that which is life shall be poetry, and every fair and manly trait shall add a richer strain to the song."

John Coleman Morgan, M.D., was born in Philadelphia in 1831. He was educated in the public schools, and passed several years as a drug clerk and surgeon's steward in the U. S. Navy. In the autumn of 1850 he entered the medical department of the Pennsylvania College, from which he graduated on March 4, 1852.

He commenced practice in Philadelphia, succeeding to the practice of his preceptor, Dr. William R. Grant, who had just died. Soon after graduation he became professor of materia

medica in the Pennsylvania Medical University, which position he held until 1856. At this time he became interested in homœopathy and soon commenced its practice, remaining a firm believer in its principles during his life.

On June 17, 1856, Dr. Morgan was married to Miss Sallie Levick, of Philadelphia. Soon after his marriage he removed to Hamilton, Ill., and from there to St. Louis, where he assisted in establishing the Homœopathic Medical College of St. Louis.

In the spring of 1858 he removed to Alton, Ill. At the breaking out of the Rebellion in 1861 he sought a position as army surgeon. After being several times refused on account of his homœopathic principles and practice, he at last received an appointment as surgeon of the 29th Regiment Missouri Volunteers, serving through the war, and finally holding the position of surgeon-in-chief of the division.

In July, 1865, Dr. Morgan returned to Philadelphia. When the Homœopathic Medical College of Pennsylvania was reorganized in 1865 Dr. Morgan was elected to the chair of anatomy; during the session he also lectured several times on surgery. He held this position until 1867, when, on the organization of the Hahnemann Medical College of Philadelphia, he accepted the chair of surgery. He held this position until the end of the session of 1875–76. In 1875 he was made Emeritus Professor of Surgery. When, in 1875, the authorities of the University of Michigan, at Ann Arbor, left to a committee of the American Institute of Homœopathy the selection of men to fill the chairs of the homœopathic department in the University, Dr. Morgan was appointed to that of theory and practice. He at once removed to Ann Arbor, remaining there, attending to his duties, until he returned to Philadelphia to engage in practice. During the session of 1886–87 Dr. Morgan lectured at the Hahnemann Medical College of Philadelphia on the "History and Institutes of Medicine," and on "Institutes of Medicine" during the sessions of 1887–88, 1888–89, 1889–90. He continued to practice in Philadelphia until he determined to remove to Vineland, N. J. There he remained until his journey westward to the Pacific coast, ultimarely locating at Los Angeles, where he died on Tuesday A.M., June 27, 1899,

of apoplexy. The pall-bearers were local physicians, four of whom graduated at Hahnemann: Drs. W. J. Hawkes, S. H. Boynton, S. S. Salisbury and F. S. Barnard. He was buried in Rosedale Cemetery, Los Angeles. He became a member of this Society in 1867, and was its president in 1882. He joined the American Institute of Homœopathy in 1867, was a charter member of the Philadelphia County Homœopathic Society, and belonged to several other societies. He was the author of a large number of papers on medical and scientific subjects, among which are: "The Action and Classification of Medicines in Connection with the Anatomy of Human Temperaments," "Diet of Infants and Young Children," "Claim of Homœopathy to a Place Among the Sciences," "Physician's Register."

During his connection with the Hahnemann College he was a corporator of the Institution, and was instrumental in the organization of the hospital on Cuthbert Street.

Dr. Morgan was a man of strong convictions, and a firm believer and expounder of the philosophy of Homœopathy. He was of the so-called Hahnemann Homœopathists, and was very particular in the dispensation of his medicines according to the tenets of Hahnemann.

John Stephen Rankin, M.D.—Dr. John Stephen Rankin, one of the oldest and most respected physicians of Pittsburg, died at his late residence, 827 South Negley Avenue, Friday, April 21, 1899, at 2.05 o'clock P.M., of acute pneumonia, after an illness of one week, at the age of 68 years.

Dr. Rankin was a native of the State of Ohio, where he lived with his parents and received his literary education. In 1853 he came to Pennsylvania and accepted the chair of mathematics in the St. Clair Institute, a classical academy near Pittsburg, a position which he filled with credit to himself and to the satisfaction of the faculty, patrons and management of the school. While occupying the above-named position he entered upon the study of medicine under the preceptorships of Drs. J. P. Dake and J. C. Burgher, and in 1858 graduated in medicine from the Homœopathic Medical College of Pennsylvania. Soon after receiving his medical degree he located in Carlisle,

Pa., where he practiced about six months, when he removed to Allegheny, Pa., where he practiced about three and a half years. He then removed to Pittsburg and became associated with Dr. M. Cote for one year, when he opened an office for himself, and there passed his life. By his industry, integrity and skill he became one of the leading physicians of the city.

In 1863 he was married to Miss Louisa Giffen, an accomplished lady and a graduate of the Female Seminary at Washington, Pa. His wife and five sons survive him.

He was a corporator of the Homœopathic Medical and Surgical Hospital and Dispensary of Pittsburg, and a member of its medical staff almost from its organization until his death. He was deeply interested in its efficiency and success, and gave much of his valuable time to hospital work, which seemed to be performed more for its subjective joy than for any prospective gain.

Dr. Rankin joined the Homœopathic Medical Society of Pennsylvania in 1872, and was president of the Allegheny County Homœopathic Society in 1879. He joined the American Institute of Homœopathy in 1865.

Dignified, courteous, affable, his intellectual and moral force commanded respect and admiration from all who came within the circle of his influence. Hospitality, sincerity and devotion characterized all his domestic relations. Many will cherish his memory for some encouraging word kindly spoken, or some good deed unselfishly performed.

At a special session of the Homœopathic Medical Society of Allegheny County an appropriate floral offering was resolved upon for his obsequies, and the following resolutions were adopted:

Resolved, That the following minutes be placed upon record relative to the death of Dr. John S. Rankin:

It having pleased Almighty God to take from our midst our fellow-member and greatly esteemed brother, Dr. John S. Rankin, we here record our cordial appreciation of the physician and the man.

Thoroughly imbued with the true spirit of his profession, he was ever alive to the highest interests of his patients, while his

daily walk and conversation gave evidence of the life and character of a Christian gentleman.

Resolved, That this Society respectfully offers its sympathy to the bereaved family, and that it attend the funeral in a body.

Horace F. Ivins, M.D., died suddenly at Easton, Pa., on Sunday, January 1, 1899, in the forty-third year of his age. He was a son of the late Isaac and Sarah A. Ivins, and was born in Penn's Manor, Bucks County, October 30, 1856. He obtained his education in the public schools, at Peirce's boarding-school in Bristol, and at Swarthmore College. Matriculating at the Hahnemann College in 1876, he was graduated in 1879. During his college career he was two years Secretary of the Hahnemann Medical Institute. For eighteen months after graduation Dr. Ivins was associated with Professor Charles Monroe Thomas, and during 1879–80 matriculated and took a special course in the medical department of the University of Pennsylvania. In order more thoroughly to prepare himself for the practice of his specialties, he went to Europe in April, 1882, and spent some time in the hospitals of London and Vienna, and while in the former city was a student of the late Sir Morell Mackenzie. Upon his return to Philadelphia he located first on Arch Street, and later at 1621 Chestnut Street. During the years that have intervened he built up a large practice, in association with Dr. Harry S. Weaver. He won prominence in his profession as a specialist in laryngology, otology and ophthalmology, and since 1882 filled the position of Professor of Laryngology in his Alma Mater. For nine years he had charge of the Throat and Ear Department of the Hahnemann Dispensary; for three years he was ophthalmologist, otologist and laryngologist to the Germantown Homœopathic Dispensary, and since 1893 had been laryngological editor of the *Journal of Ophthalmology, Otology and Laryngology*, of New York. He joined the American Institute of Homœopathy in 1887, and was Recording Secretary of the Homœopathic Medical Society of Pennsylvania in 1886 and 1887. He was for three years Secretary of the Homœopathic Medical Society of Philadelphia, and for two years (1885, 1886) Second Vice-

President of the Alumni Association of Hahnemann Medical College. He joined this Society in 1882. In 1881, when in Europe, he became a member of the International Medical Congress, which met in London that year. In 1888 he spent five months in practical hospital work in Paris and London, and while in Europe was a member of the International Ophthalmological Congress, which met at Heidelberg. As a result of his successful career in his profession, Dr. Ivins published, in 1893, a work on diseases of the nose and throat, a text-book for students and practitioners, containing 507 pages, with 129 illustrations, including eighteen colored figures, chiefly original, from drawings and photographs of anatomical dissections. It is a thorough and comprehensive treatise on those subjects, and has already been accepted as a text-book in nearly every homœopathic college in the United States. The last two years, being in poor health, Dr. Ivins travelled extensively.

The funeral was held from the residence of his brother-in-law, Mr. Amos B. Headley, in Tullytown, Pa., on Thursday, January 5, 1899, at 2 o'clock P.M.

For several years previous to his death Dr. Ivins had suffered from progressive locomotor ataxy, on account of which complaint he was obliged to relinquish his practice.

Joseph E. Jones, M.D., was born in West Chester, Pa., October 14, 1833. He was educated at Bucknell University, at Lewisburg, Pa. In 1853 he entered the office of the celebrated Dr. Joseph Carson, Professor of Materia Medica in the University of Pennsylvania, as a private student, and matriculated at the university. Although a two years' course was all that was legally required, he, in order to become thoroughly proficient in his chosen calling, devoted three years to his college career. He graduated from the University of Pennsylvania in the spring of 1856, with a most honorable standing. He soon afterwards received the appointment as resident physician in the Philadelphia Hospital (Blockley). About this time Dr. Jones became dissatisfied with the results of the prevailing treatment, and determined to devote a year to the investigation of the truth or falsity of homœopathy, which was then exciting much attention.

The result of this determination was the turning-point in his life. He soon satisfied himself not only of the correctness of the theories of the new system, but of its superior results in treatment. After taking a post-graduate course in the Homœopathic Medical College of Pennsylvania, in 1858 he settled in his native town of West Chester to establish a practice in accordance with the tenets of homœopathy.

Of course he had much to encounter in battling against the teachings of allopathy and the prejudices it had implanted in the community; but every day was placing on a firmer foundation the system he believed in and practiced, and his professional success soon became too potent an argument to be resisted. His practice steadily and rapidly increased, and became one of the largest in the county.

For years he made a specialty of diseases of women, and he perfected several instruments pertaining to that branch of practice. In 1869 he published a very complete and interesting "History of the Homœopathic Practitioners of Chester County" (pamphlet, West Chester, *American Republican* Print, 1869), which is of great value to the student of homœopathic history in Pennsylvania. He was also an extensive writer for the journals of our school.

He joined the Pennsylvania State Homœopathic Society in 1869, was vice-president in 1875, and the following year was president of the Society. He was an organizer of the Chester County Homœopathic Medical Society at its inception in 1858, and was the first secretary.

In 1887, at the organization of the Chester Organon Club, he took an active part, and was a cherished member until his death. In 1858 he joined the American Institute of Homœopathy. He was the first homœopathic member of the staff of the Chester County Hospital. He was also a member of the Delaware County Homœopathic Medical Society.

Dr. Jones, in the midst of his active professional labors, was prominently identified with the cause of the Sunday-school, and was a very enthusiastic worker. For several years he was superintendent of the largest Sunday-school ever assembled under one roof in Chester County. He was a member of the First Baptist Church, holding the office of senior deacon.

He was obliged by ill health to retire from practice about a year previous to his death. Many here will remember what a portly man he was, but during his illness he became very much emaciated—but the shadow of his former self.

He passed away at 7.40 Saturday evening, May 6, 1899, aged 66 years. His disease was paralysis. A widow and three children survive. He practiced in Chester County for forty-four years, and to speak of homœopathy in Chester County is to speak of the labors and triumphs of Dr. Jones.

He was well known and beloved by his patients and his acquaintances.

At a special meeting of the Organon Club the feeling of the members was expressed as follows: "No words will be made to define truly the fine lines upon which his character was built or convey a full meaning of what he was to all of us who knew him. . . . To know him was to know him well, for he knew no dissimulation. Those who were honored with his friendship were elevated by associating with one whose pure life, generous impulses and brave and energetic spirit left them on a higher plane."

I. Tisdale Talbot, M.D.—Dr. I. Tisdale Talbot, Dean of the Boston University School of Medicine, and Director of the Massachusetts Homœopathic Hospital, died suddenly at his summer home in Hingham, Mass., late on Sunday evening, July 2, 1899, at the age of 69 years, as a result of apoplexy. He was in his usual health up to the moment he was stricken by the disease, and died almost instantly.

The news of Dr. Talbot's death was a great shock to the officials of the Boston Homœopathic Hospital, of which he had been so long the director. He was in the hospital on Saturday, and his apparently sound physical condition gave no intimation that death was near. The grief and feeling of real deprivation was universal among the attaches of the institution he had served so faithfully and so long.

Dr. Talbot was born in Sharon, Me., October 29, 1829. Being thrown upon his own resources to obtain an education, he went to Baltimore at the age of 18 years, and there opened a private school. This proved very successful, and with teaching occasionally he obtained means to continue his own studies.

He entered Worcester Academy, where he fitted himself for the sophomore class at Harvard. Circumstances, however, prevented him from completing his classical course, and in March, 1851, he entered the Harvard Medical School.

He passed one winter in Philadelphia, and was graduated from the Hahnemann Medical College in 1853, and from the Harvard Medical School in 1854. From 1854 to 1858 he continued his medical studies in Europe.

From 1848 to the time of his death Dr. Talbot made Boston his place of residence, his office being at 687 Boylston Street. He had an extensive practice, and did a great deal to organize and establish homœopathy in that city. He originated the Homœopathic Medical Dispensary, chartered in 1886, and, except during his absence in Europe, acted as its secretary up to the time of his death.

He did much for the Massachusetts Homœopathic Hospital, of which he was trustee, secretary, and vice-president, as well as President of its Medical Board during several years.

He was instrumental in securing the establishment by the State of the Westboro Insane Hospital, which is under homœopathic control. He was active in organizing the Boston University School of Medicine, of which from its commencement he was the dean, as well as Professor of Surgery.

He had occupied the positions of Secretary and President of the Boston Homœopathic Society, the Massachusetts Homœopathic Medical Society, and was General Secretary to the American Institute of Homœopathy from 1866 to 1869, and its president in 1872.

He was Vice-President of the International Homœopathic Congress held in London in 1881, and president of a similar congress held in Atlantic City in 1892.

He established, and from 1867 to 1873 was the editor of the *New England Medical Gazette.* He was a frequent contributor to medical journals.

Aside from active membership in many medical and other societies, he was an honorary member in twelve State medical societies, and in the national homœopathic societies of Great Britain, Germany and France.

In 1856 Dr. Talbot married Miss Emily Fairbanks, of Winthrop, Me.

The funeral of Dr. Talbot was held in Trinity Church, Boston, and he was buried at Mount Auburn. A delegation of medical men from different parts of the country were present. There were vocal selections by the regular choir of the church, as well as by the boys' choir of St. Stephen's. The following-named gentlemen acted as pall-bearers at the interment: Col. C. R. Codman, Col. H. S. Russell, Dr. E. M. Kellogg, Dr. William Tod Helmuth, Dr. Conrad Wesselhoeft, Hon. Alden Speare, James M. Bugbee and Winslow Warren. The ushers were Capt. Frank H. Delano, Talbot B. Aldrich, Amos Binney, Dr. J. E. Briggs, Dr. F. P. Batchelder, E. W. Colburn, E. T. Colburn, Dr. J. L. Coffin, Dr. George D. Rice, Dr. Horace Packard, Dr. N. Emmons Paine, Dr. W. F. Wesselhoeft and Winthrop Wetherbee.

There was a meeting of the Faculty of Boston University on the morning of the 3d to take action on the death of Dr. Talbot. President Warren presided. Dr. Sutherland stated briefly the object of the meeting, and in a few words spoke feelingly of the loss the University had sustained by the death of its dean. He said in part: "We had become accustomed to look upon Dr. Talbot's help as essential to the welfare of the school. His excellent judgment, foresight, tact, energy and fearlessness made him a very tower of strength in our midst." President Warren also made eulogistic remarks. The Massachusetts Homœopathic Society, Boston Homœopathic Society, and the Massachusetts Surgical and Gynæcological Society conjoined also in a memorial service, which was presided over by Dr. Richardson, the president of the former society.

Resolutions were then adopted by the faculty on the death of Dr. Talbot, in which a tribute was paid to the great work he had accomplished in directing and sustaining the university. A copy of these resolutions is to be presented to his family. At the close of the meeting a committee was appointed to arrange for a memorial service to be held in the autumn.

The Executive Committee of the Boston University Corporation have placed on record their expression of affectionate re-

gard for the character and manifold services of their late colleague and homœopathic leader, Dr. I. Tisdale Talbot.

We, the members of the Consulting Board of the Westboro Insane Hospital, shocked and profoundly saddened by the sudden loss of our honored Chairman, Dr. I. Tisdale Talbot, desire to express our grief and our sense of personal bereavement in the sundering of the close ties which have so long united us as men, as physicians, and as workers upon this Board, as well as our keen realization of the loss to this Institution of his wise counsels, his ever active interest, and his ripened experience.

We desire, also, to tender to her who labored with him for the welfare of this hospital, as in many other fields of usefulness, and to the other members of his family, our sincere and heartfelt sympathy.

HOWARD P. BELLOWS,
CHARLES L. NICHOLS,
JOHN PRENTICE HAND,
For the Board.

Dr. Talbot's Championship—(From minutes adopted by Boston University Executive Committee).—Unfortunately for the organic unity and harmony of the profession in this Commonwealth, a great controversy arose in the Massachusetts Medical Society over the toleration or non-toleration of the ideas and practices known as homœopathic. On the one side, good and great men asserted that these ideas and practices, if left to the scientific and practical testing of each individual member of the society, could live no longer than they might show themselves deserving to live. On the other hand, others no less conscientious, though less hospitable to new ideas, contended that the new doctrines and practices were so at variance with well-ascertained results of experience, and so adapted to give those who accepted them a partisan attitude, an animus over against those who did not, that mutual fellowship in one and the same medical body was out of the question. After a long and acrimonious controversy, the champions of the latter view were found to outnumber their opponents, and by means of an exciting legal process the minority, including Dr. Talbot, were ejected from the society, and deprived of what they considered

most manifest personal and professional rights under the State-given charter of the body and the existing laws of the Commonwealth.

If any supposed that this would be the end of the new movement, they were not a little mistaken. It was rather the beginning. For the first time in Massachusetts a strong body of educated and experienced physicians, closely knit in sympathy, found themselves in unsought isolation from former colleagues, and standing by themselves as representatives of homœopathic principles. They also had behind them a strong and sympathetic clientèle, including many of the wealthiest and most intelligent families in Boston and its vicinity. In the eyes of this clientèle the new association stood for fairness in professional intercourse and for freedom of scientific inquiry. In Dr. Talbot, more than in any other, the movement found a leader of immense executive ability. Charters were secured for a medical school, a dispensary and a hospital, to be organized and conducted according to the new and freer spirit. Before the first was accepted and organization begun, it was found that a majority of the trustees of the financially embarrassed New England Female Medical College belonged to a clientèle of the expelled physicians, and that the same was true of the founders and organizers of the just-chartered Boston University. Furthermore, in the governing boards of these two institutions even those members who employed as physicians men of the lately-victorious party believed that if there was to be a new medical school in Boston it would be decidedly in the public interest to have it under the government, not of a body of associated physicians, but rather of a non-partisan university corporation, and subject to the broad, humanistic influences and scientific spirit of a metropolitan university. As a result of negotiations, the Legislature made over to Boston University the oldest woman's medical college in America for reorganization upon a coeducational basis and for conduct as a medical department. On their part, the trustees of the university expressly reserved to themselves the right to establish any other medical departments that might at any time appear expedient; and, as a further illustration of their entire catholicity in the

matter, adopted statutes that opened the way for students trained in the department to be promoted to the doctor's degree under old-school or new-school auspices, as they might prefer. From the beginning, in 1873, until the date of his death, the annually elected dean of the school was Dr. Talbot.

Dr. Talbot was made an honorary member of our Society in 1868.

Dr. Bushrod W. James: I want to make a motion. I remember in 1866 New York had a State Society and Pennsylvania had none. I interested myself in writing to the various physicians of the homœopathic school throughout the State, and the outcome of that was the formation of a convention which was held in Pittsburg. I remember among those who were active in forming our State Society the name of Dr. Cooper. I also recall one, who is now very ill, and that is Dr. T. C. Williams, one of the earlier members of this Society whom we might call the charter members. I understand that Dr. Williams is very low at the present time; and it seems to me fitting that we should pass a resolution expressing our sense of loss in the death of Dr. Cooper, especially as he was one of the founders of the Society, and also one of sympathy to Dr. Williams, who is, at the present time, so very ill; and I would make a motion that a committee of three (3) be appointed to prepare suitable resolutions, one of sympathy and the other of our regard for Dr. Williams. (Motion seconded and carried.)

President: I would appoint on this committee Drs. Bushrod W. James, J. H. McClelland and C. C. Rinehart.

REPORT OF THE COMMITTEE ON THE DEMISE OF JOHN F. COOPER, M.D.

Philadelphia, Pa., September 28, 1899.

Your Committee on an "In Memoriam" of the death of our esteemed colleague, the late Dr. John F. Cooper, of Allegheny City, whom we have all delighted to honor, respectfully submit the following minute in his name, and that it be spread upon the minutes of the Society:

In the loss of Dr. Cooper this Society, as well as every one with whom he was connected, has met with an irreparable loss.

As a man, he was upright in all his dealings with his fellow-men.

As a physician, he was capable and conscientious, ever ready to sacrifice himself for the well-being of his patients and friends.

He had the full confidence and regard of the profession wherever he was known. He was a man upright in his walk and conversation, and he passed away in the attitude of prayer, as befitted the noble and highly religious character of our brother.

In the death of Dr. Cooper we have met with a definite and great loss, for men of his character are not so many but that in their passing away they will be greatly missed.

His was a loss to his native city, a great loss to his church, and a greater loss to the medical profession of which he was a true ornament; and to this Society he was a still greater loss, for his counsel, labors and faithfulness to its every interest ever since he took an active part in its formation.

We wish, as a Society, to express the deep sense of our grief at the sudden removal of our beloved brother and friend, at the same time recognizing that He who has taken him from us, doeth all things well.

Bushrod W. James, M.D.,
J. H. McClelland, M.D.,
C. C. Rinehart, M.D.,
Committee.

The Society hears with regret of the illness of our esteemed fellow-member, Dr. C. F. Williams, of this city, and we desire to extend to him our sympathy in his sickness, and to express our hope that he may have a speedy and satisfactory recovery.

Bushrod W. James, M.D.,
J. H. McClelland, M.D.,
C. C. Rinehart, M.D.,
Committee.

Dr. J. H. McClelland offered the following resolution, which was adopted:

Resolved, That it is the sense of the Homœopathic Medical Society of the State of Pennsylvania that Hahnemann's origi-

nal and only rendering of the rule of practice upon which homœopathy is based, viz., *Similia Similibus Curentur*, is hereby reaffirmed; and the Secretary of this Society is hereby ordered to employ this form in the publications of the Society. It is also ordered that this form be printed on the title-page of the TRANSACTIONS and on all circulars.

On motion, the subject of the practice of midwifery was referred to the Committee on Legislation for thorough consideration and report.

Dr. T. H. Carmichael moved:

That the Homœopathic Medical Society of the State of Pennsylvania endorses the *Pharmacopœia* of the American Institute of Homœopathy, and recommends it to all of its members and the profession in general as the standard work for the preparation of homœopathic remedies.

By direction of the Board of Trustees, Dr. W. H. Keim submitted the following amendments to the By-Laws for the consideration of the Society:

Amend Article V., Section I., by striking out after the word "directed," on the third line, these words: "Give orders on the Treasurer according to these By-Laws," that the clause may read:

ARTICLE V.—DUTIES OF OFFICERS.

SECTION 1. The President shall preside at all meetings of the Society. He shall preserve order, appoint all committees unless otherwise directed, and discharge all other duties usually pertaining to a presiding officer, in accordance with the provisions of the Charter and these By-Laws. He shall be, *ex-officio*, a member of all standing committees of the Society. He shall not be eligible to office two terms in succession.

Amend Article V., Section VII., by striking out all after the word "Society," on the third line, and inserting "The Trustees shall have the power to disburse all money belonging to the Society. No money shall be paid from the Treasury except upon a written order, drawn on the Treasurer, countersigned by the President and Secretary of the Board of Trustees," that the clause may read:

Sec. 7. The Trustees shall have general supervision of the business of the Society, hold at least one meeting every year, and make a report at the annual session of the Society. The Trustees shall have the power to disburse all money belonging to the Society. No money shall be paid from the Treasury except upon a written order, drawn on the Treasurer, countersigned by the President and Secretary of the Board of Trustees.

Amend Article V., Section VI., by adding after the word "Meeting" these words: "The report shall, without being read in open session, be referred to the Publication Committee, and published in full in the Transactions," that the clause may read:

Sec. 6. The Necrologist, upon the death of a member of the Society, shall prepare a suitable obituary and present it to the Society at its annual meeting. The report shall, without being read in open session, be referred to the Publication Committee, and published in full in the Transactions.

Amend Article VI., Section I., by striking out the word "nine" on the second line and inserting the word "eleven," that the clause may read:

ARTICLE VI.—Meetings.

Section 1. The annual meeting shall be held in the month of September, at eleven a.m., on the days and at the place decided upon at the annual meeting next preceding.

On motion, the proposed amendments were directed to be printed in the Transactions for consideration at the next annual meeting.

On motion, the following bills were directed to be paid:

Official Stenographer, $100.

Recording Secretary (travelling expenses and stationery), $31.

Andrew Oliver (services), $10.

Corresponding Secretary (postage and printing), $79.82.

Wilkesbarre was selected as the place for the next meeting, and the last Tuesday, Wednesday and Thursday of September as the time.

The election of officers, which was conducted by Drs. George W. Smith and John E. James as Tellers, resulted as follows.

President, C. C. Rinehart, M.D., Pittsburg; First Vice-Presi-

dent, E. H. Hill, M.D., Pittston; Second Vice-President, R. P. Mercer, M.D., Chester; Recording Secretary, Geo. B. Moreland, M.D., Pittsburg; Corresponding Secretary, E. M. Gramm, M.D., Philadelphia; Treasurer, Ella D. Goff, M.D., Allegheny; Necrologist, T. S. Bradford, M.D., Philadelphia. Board of Censors (to serve for three years), Trimble Pratt, M.D., Media. Trustees (to serve for one year), I. B. Gilbert, M.D., Philadelphia; (to serve for three years) D. P. Maddux, M.D., Chester; Z. T. Miller, M.D., Pittsburg; E. M. Gramm, M.D., Philadelphia.

Votes of thanks were tendered to the Faculty of the Hahnemann Medical College for the use of the meeting rooms; to the various newspapers for reports of the meeting; and to Dr. B. F. Betts, the President, for the impartial and successful manner in which he conducted the meeting.

The following Sections and Committees were appointed:

Section of Clinical Medicine.—A. B. Lichtenwalner, M.D., Chairman; Associates, Drs. Mary Branson, T. H. Carmichael, J. H. Closson, Isaac Cooper, E. M. Gramm, L. B. Griffith, W. M. Griffith, O. S. Haines, J. E. Harner, A. L. Kistler, D. B. James, F. W. Lange, F. M. Lawrence, Z. T. Miller, O. H. Paxson, L. P. Posey, E. R. Snader, R. E. Tomlin, S. C. Webster.

Section of Gynæcology.—J. H. Thompson, M.D., Chairman; Associates, Drs. R. C. Allen, D. J. Baker, B. F. Betts, T. M. Bulick, W. H. A. Fitz, T. J. Gramm, C. H. Hofmann, J. E. James, H. H. Lindabury, J. H. McClelland, Pearl Starr, J. L. Van Tine, Julia Gould Waylan.

Section of Materia Medica.—Augustus Korndœrfer, Sr., M.D., Chairman; Associates, Drs. A. P. Bowie, T. H. Carmichael, Edward Cranch, W. G. Dietz, P. S. Duff, J. M. Gerhart, R. P. Mercer, C. S. Middleton, Charles Mohr, C. S. Schwenk, W. A. Seibert, G. W. Smith, R. T. White.

Section of Obstetrics.—E. W. Mercer, M.D., Chairman; Associates, Drs. Mary A. Cooke, Isaac Crowther, Ella D. Goff, D. C. Kline, A. Korndœrfer, Jr., J. B. McClelland, J. N. Mitchell, G. W. Parker, Margaret H. Schantz, F. R. Schmucker, Emma T. Schreiner.

Section of Ophthalmology, Otology and Laryngology.—H. F. Schantz, M.D., Chairman; Associates, Drs. W. W. Blair, E. W. Brickley, H. K. Hoy, H. I. Jessup, W. H. Lyle, F. W. Messervè, G. J. Palen, I. G. Shallcross, C. E. Spahr, William Spencer, G. W. Stewart, C. M. Thomas, Flora E. Wasserman, H. S. Weaver.

Section of Pædology.—Sarah J. Coe, M.D., Chairman; Associates, Drs. W. H. Bigler, J. D. Boileau, F. W. Burlingame, G. H. Clark, Anna C. Clarke, P. H. Ealer, T. M. Johnson, J. L. Redman, W. W. Van Baun, J. D. Ward, Chandler Weaver, A. F. Ziegenfus.

Section of Pathology and Pathological Anatomy.—G. A. Van Lennep, M.D., Chairman: Associates, Drs. Clarence Bartlett, W. D. Bayley, W. D. Carter, T. S. Dunning, I. B. Gilbert, T. P. Gittens, W. C. Goodno, P. Sharples Hall, W. K. Ingersoll, E. H. Van Deusen.

Section of Sanitary Science.—Trimble Pratt, M.D., Chairman; Associates, Drs. A. W. Baily, A. M. Barnes, A. J. Bittner, F. W. Boyer, Mary Brewer, H. M. Bunting, William Cowley, Pemberton Dudley, Silas Griffith, B. W. James, W. H. Keim, W. C. Powell, H. L. Stambach, J. A. Walter, B. K. Wilbur.

Section of Surgery.—J. W. Coolidge, M.D., Chairman; Associates, Drs. L. T. Ashcraft, G. M. Christine, E. R. Gregg, J. W. Hassler, Malcolm Macfarlan, D. P. Maddux, H. L. Northrop, R. C. Pitcairn, S. M. Rinehart, C. P. Seip, W. G. Steele, Walter Strong, L. W. Thompson, W. B. Van Lennep, C. V. Vischer, L. H. Willard.

Committeee on Organization, Registration and Statistics.—George B. Moreland, M.D., Chairman: Associates, Drs. Ella D. Goff, Edward M. Gramm.

Committee on Legislation.—H. C. Chisholm, M.D., Chairman; Associates, Drs. Clarence Bartlett, W. K. Brown, Edward Cranch, J. H. Closson, Isaac Crowther, W. G. Dietz, Pemberton Dudley, D. P. Gerberich, Edward M. Gramm, J. C. Guernsey, W. A. Hassler, J. E. James, C. W. Karsner, E. H.

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Committee on Publication.—Edward M. Gramm, M.D., Chairman; Associates, Drs. Ella D. Goff, George B. Moreland.

Committee on Hahnemann Monument.—W. J. Martin, M. D., Chairman; Associates, Drs. G. F. Baier, C. F. Bingaman, A. P. Bowie, F. W. Boyer, Mary Branson, W. K. Brown, S. E. Burchfield, Anna C. Clarke, J. H. Closson, G. H. Clark, J. W. Coolidge, J. C. M. Drake, J. Ely, E. M. Gramm, G. W. Gregory, J. C. Guernsey, J. E. Harner, F. E. Harpel, L. K. Heath, H. K. Hoy, T. A. Irwin, B. W. James, T. M. Johnson, A. Korndœrfer, Sr., E. N. Leake, Duncan Macfarlan, D. P. Maddux, J. H. McClelland, C. Mohr, S. B. Moon, E. C. Parsons, Hugh Pitcairn, L. P. Posey, W. C. Powell, J. P. Pursell, C. W. Roberts, E. B. Rossiter, H. F. Schantz, W. A. Seibert, F. J. Slough, W. W. Van Baun, H. B. Ware, Julia G. Waylan, William Willets.

Delegates to Societies.

American Instituue of Homœopathy.—Drs. Pemberton Dudley, C. S. Middleton, Z. T. Miller.

Delaware State Society.—Drs. T. S. Dunning, D. P. Maddux, Emma T. Schreiner.

Interstate Committee of the American Institute of Homœopathy.—Drs. E. M. Gramm, Z. T. Miller.

Maryland State Society.—Drs. H. L. Northrop, I. G. Smedley, S. C. Webster.

Massachusetts State Society.—Drs. W. C. Goodno, W. B. Van Lennep, H. B. Ware.

New Jersey State Society.—Drs. W. H. Seibert, E. R. Snader, C. V. Vischer.

New York State Society.—Drs. T. J. Gramm, C. Mohr, C. C. Rinehart.

Ohio State Society.—Drs. W. W. Blair, A. P. Bowie, C. P. Seip.

Southern Institute of Homœopathy.—Drs. J. E. James, W. H. Keim, G. W. Smith.

West Virginia State Society.—Drs. C. F. Bingaman, E. N. Brickley, S. W. S. Dinsmore.

OFFICERS OF THE SOCIETY FROM ITS ORGANIZATION TO THE PRESENT TIME.

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1871. M. COTE, M.D.,
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1873. B. W. JAMES, M.D. (February),
1873. J. F. COOPER, M.D. (October),
1874. C. A. STEVENS, M.D.,
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1873. M. FRIESE, M.D. (October),
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1886, 1887. H. F. IVINS, M.D.,
1888, 1889. J. H. CLOSSON, M.D.,
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1896–1899. G. B. MORELAND, M.D.

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1896–1899. E. M. GRAMM, M.D.

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1871–1873 (February) O. B. GAUSE, M.D.,
1873 (October) and 1874. R. J. McCLATCHEY, M.D.,
1875–1899. J. F. COOPER, M.D.

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1885–1889. W. R. CHILDS, M.D.,
1890–1894. W. J. MARTIN, M.D.,
1895, 1896. T. S. DUNNING, M.D.,
1897, 1899. T. L. BRADFORD, M.D.

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1899—Adams, T. Louis, M.D., 1831 Chestnut Street, Philadelphia.
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1883—Coe, Sarah J., M.D., 92 N. Franklin Street, Wilkesbarre.
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1895—Cook, W. C., M.D., 327 Grandview Avenue, Pittsburg.
1894—Cooke, Mary A., M.D., 2113 N. 18th Street, Philadelphia.
1889—Coolidge, J. W., M.D., 334 Washington Ave., Scranton.
1889—Cooper, Isaac, M.D., 194 S. Broad Street, Trenton, N. J.
1887—Cooper, John, M.D., 54 Arch Street, Allegheny.
1894—Cooper, Peter, M.D., 502 Delaware Avenue, Wilmington, Del.
1895—Cooper, Wm. H., M.D., Oakmont.
1887—Cowley, William, M.D., 6412 Penn Avenue, Pittsburg.
1882—Cranch, Edw., M.D., 109 W. Ninth Street, Erie.
1898—Cresson, Charles C., M.D., 5909 Green Street, Gtn., Phila.
1885—Crowther, Isaac, M.D., 143 E. 7th Street, Chester.
1891—Davis, B. L., M.D., Bellevue.
1897—Dehoff, J. W., M.D., York, Penna.
1866—DETWILLER, JOHN J., M.D., 52 Center Square, Easton.
1893—Detwiller, W. K., M.D., Easton.
1886—Dietz, W. G., M.D., 21 N. Vine Street, Hazleton.
1878—DINSMORE, S. W. S., M.D., Sharpsburg.
1895—Doyle, H. H., M.D., 485 Fifth Avenue, Pittsburg.

1891—Drake, J. C. Merle, M.D., 720 Sassafras Street, Erie.
1867—DUDLEY, PEMBERTON, M.D., 1405 N. 16th St., Phila.
1878—DUFF, P. S., M.D., Great Belt.
1882—Du Four, W. M., M.D., 755 W. Third Street, Williamsport.
1881—Dunning, T. S., M.D., 1328 N. 15th Street, Philadelphia.
1893—Ealer, Percy H., M.D., 815 N. 24th Street, Philadelphia.
1873—EDMUNDSON, W. F., M.D., 1321 Fifth Avenue, Pittsburg.
1891—Ely, J., M.D., Washington.
1896—Esrey, L. K., M.D., 1642 Pine Street, Philadelphia.
1895—Fitz, W. H. A., M.D., 819 N. 25th Street, Philadelphia.
1884—Fleming, R. K., M.D., 6224 Station Street, Pittsburg.
1892—Flint, Harvey E., M.D., West 11th Street, Erie.
1892—Flint, John F., M.D., 1112 Peach Street, Erie.
1873—FULTON, H. W., M.D., 5949 Penn Avenue, Pittsburg.
1889—Gangloff, Charles, M.D., 6 S. Main Street, Pittsburg.
1898—Gann, G. W., M.D., DuBois.
1892—Gerberich, D. P., M.D., Lebanon.
1886—Gerhart, Jos. M., M.D., 1127 Mt. Vernon St., Philadelphia.
1879—Getze, G. M., M.D., Tarentum.
1891—Gilbert, Irwin B., M.D., 2027 Columbia Ave., Philadelphia.
1894—Gittens, Theodore P., M.D., 1716 Diamond St., Philadelphia.
1899—Godshall, S. G., M.D., Edge Hill.
1891—Goff, Ella D., M.D., 10 N. Diamond Street, Allegheny.
1875—GOODNO, W. C., M.D., 1724 Chestnut Street, Philadelphia.
1883—Gramm, Edward M., M.D., 1833 Chestnut St., Philadelphia.
1867—GRAMM, G. E., M.D., Ardmore.
1883—Gramm, Theo. J., M.D., 846 N. Broad St., Philadelphia.
1895—Gregg, Edw. R., M.D., 334 S. Highland Avenue, Pittsburg.
1889—Gregory, G. W., M.D., Troy.
1888—Griffith, Louis B., M.D., 2526 Ridge Ave., Philadelphia.
1881—Griffith, Silas, M.D., 1431 Girard Avenue, Philadelphia.
1877—GRIFFITH, W. M., M.D., 1827 N. 17th Street, Philadelphia.
1886—Grimes, Thomas H., M.D., Sewickley.
1874—GUERNSEY, J. C., M.D., 1923 Chestnut Street, Philadelphia.
1867—GUMPERT, B. BARTON, M.D., 840 Franklin St., Phila.
1886—Gundlach, F. C., M.D., 1722 Sarah Street, Pittsburg.
1894—Haas, George H., M.D., Allentown.
1885—Haines, O. S., M.D., 137 N. 15th Street, Philadelphia.
1896—Hall, P. Sharples, M.D., 1604 Arch Street, Philadelphia.
1895—Hall, W. D., M.D., Altoona.
1887—Haman, W. A., M.D., 122 N. 8th Street, Reading.
1898—Hammond, W. Wilson, M.D., 1420 Poplar Street, Phila.

1883—Hancock, Jos., M.D., 1639 Columbia Ave., Philadelphia.
1899—Harner, D. W., M.D., New Holland.
1888—Harner, John E., M.D., 117 S. 5th Street, Reading.
1891—Harpel, F. E., M.D., Danville.
1884—Harris, D. R., M.D., 41 N. Jefferson Street, New Castle.
1892—Hassler, J. Wyllis, M.D., 1503 Poplar St., Philadelphia.
1883—Hassler, W. A., M.D., 105 N. 8th Street, Allentown.
1893—Heath, L. R., M.D., Mercer.
1895—Heilner, H. F., M.D., Scranton.
1883—Helfrich, J. H., M.D., Allentown.
1899—Hendrixson, Lewis H., M.D., New Holland.
1892—Heritage, A. C., M.D., Jenkintown.
1873—HERRON, C. D., M.D., 3505 Butler Street, Pittsburg.
1892—Hill, E. H., M.D., Tunkhannock.
1882—Hofman, C. H., M.D., 510 S. Highland Avenue, Pittsburg.
1883—Holben, M. J., M.D., Slatington.
1892—Holsberg, W. H., M.D., Lebanon.
1883—Horner, J. Richey, M.D., 275 Prospect Street, Cleveland, O.
1889—Hoy, H. K., M.D., 1203 Fourteenth Street, Altoona.
1880—Humes, J. R., M.D., Hollidaysburg.
1886—Ingersoll, W. K., M.D., 4008 Chestnut St., Philadelphia.
1892—Irvin, Thomas A., M.D., Franklin.
1866—JAMES, BUSHROD W., M.D., 1719 Green Street, Phila.
1867—JAMES, JOHN E., M.D., 1521 Arch Street, Philadelphia.
1889—Jamison, M. R., M.D., Greensburg.
1892—Jessup, H. I., M.D., 1829 Arch Street, Philadelphia.
1881—Johnson, Theodore M., M.D., 200 Susquehanna Avenue, Pittston.
1892—Karsner, Charles W., M.D., 316 S. 12th St., Philadelphia.
1881—Karsner, Daniel, M.D., 205 Tulpehocken Street, Germantown.
1889—Kase, Edmund H., M.D., 1325 Girard Ave., Philadelphia.
1891—Kaufman, John, M.D., Hazleton.
1896—Keelor, J. G., M.D., 48th and Baltimore Ave., Philadelphia.
1894—Kehler, B. Frank, M.D., 1708 N. 8th Street, Philadelphia.
1885—Keim, William H., M.D., 1716 N. 18th St., Philadelphia.
1884—King, W. D., M.D., 1046 Fifth Avenue, Pittsburg.
1892—Kistler, A. L., M.D., N. E. cor. 9th and Linden Streets, Allentown.
1897—Kistler, D. S., M.D., Wilkesbarre.
1891—Kline, D. C., M.D., 5th and Chestnut Streets, Reading.
1891—Knauer, J. C., M.D., 233 S. 9th Street, Reading.
1899—Knerr, Bayard, M.D., 12th and Spruce Sts., Philadelphia.

1877—KNERR, C. B., M.D., 1833 Chestnut Street, Philadelphia.
1872—KORNDŒRFER, AUGUSTUS, Sr., M.D., 1728 Green Street, Philadelphia.
1896—Korndœrfer, Augustus, Jr., M.D., 142 N. 18th St., Phila.
1896—Krusen, Edward A., M.D., Collegeville.
1889—Lange, F. W., M.D., 429 Lackawanna Avenue, Scranton.
1894—Lawrence, F. Mortimer, M.D., 1601 Girard Avenue, Phila.
1888—Layman, Alfred, M.D., 1630 N. 18th Street, Philadelphia.
1887—Leake, E. N., M.D., Butler.
1884—Leckie, J. W., M.D., Hazleton.
1894—Lentz, Levi R., M.D., Fleetwood.
1894—Lichtenwalner, A. B., M.D., 2435 N. 7th St., Philadelphia.
1895—Lindabury, A. A., M.D., Scranton.
1896—Lyle, William Howard, M.D., 1833 Master St., Philadelphia.
1868—MACFARLAN, MALCOLM, M.D., 1805 Chestnut St., Phila.
1893—Macfarlan, Duncan, M.D., 3924 Chestnut St., Philadelphia.
1886—Maddux, D. P., M.D., 700 Madison Street, Chester.
1878—MALIN, WILLIAM H., M.D., 8408 Germantown Avenue, Chestnut Hill, Philadelphia.
1892—Mansfield, Harry K., M.D., 19 W. Chelten Avenue, Germantown, Philadelphia.
1881—Mansfield, J. R., M.D., 4852 Germantown Avenue, Philadelphia.
1891—Marks, William F., M.D., 118 N. 9th Street, Reading.
1885—Marsden, Biddle R., M.D., Chestnut Hill, Philadelphia.
1883—Marshall, Anna M., M.D., 1420 Chestnut St., Philadelphia.
1891—Marshall, R. S., M.D., 424 Shady Avenue, Pittsburg.
1899—Martin, Robert W., M.D., 1831 Chestnut St., Philadelphia.
1877—MARTIN, W. J., M.D., 1712 Carson Street, S. S., Pittsburg.
1878—MAURER, J. M., M.D., Washington.
1891—McCauley, J. C., M.D., 128 Connecticut Street, Rochester.
1879—McClelland, J. B., M.D., 409 Penn Avenue, Pittsburg.
1867—McCLELLAND, J. H., M.D., 5th and Wilkins Avenue, Pittsburg.
1884—McClelland, R. W., M.D., 5th and Wilkins Avenue, Pittsburg.
1883—McClure, Eliza H. Lang, M.D., 1919 Wallace St., Philadelphia.
1893—McCracken, William, M.D., 2110 Carson Street, Pittsburg.
1888—Mercer, Edward W., M.D., 1705 Arch Street, Philadelphia.
1871—MERCER, ROBERT P., M.D., 223 W. 3d Street, Chester.
1896—Merrell, A. F., M.D., Hallstead.
1888—Messervè, F. W., M.D., 1607 Arch Street, Philadelphia.

1871—MIDDLETON, CALEB S., M.D., 1523 Girard Ave., Phila.
1887—Millen, J. C., M.D., 911 Downing Ave., Denver, Col.
1887—Miller, Z. T., M.D., 2013 Carson Street, S. S., Pittsburg.
1883—Mitchell, J. N., M.D., 1505 Spruce Street, Philadelphia.
1875—MOHR, CHARLES, M.D., 1823 Green Street, Philadelphia.
1893—Monroe, J. E., M.D., Orange, Mass.
1893—Moon, S. B., M.D., 1314 Eighth Ave., Beaver Falls.
1893—Moreland, George B., M.D., 1321 Fifth Avenue, Pittsburg.
1891—Mueller, G. A., M.D., Allegheny.
1888—Murdock, Robert, M.D., 160 S. Main Street, Wilkesbarre.
1894—Myers, Charles Elwood, M.D., 170 Green Lane, Manayunk, Philadelphia.
1866—NEVILLE, W. H. H., M.D., 1833 Wallace St., Philadelphia.
1893—Northrop, H. L., M.D., 1729 Arch Street, Philadelphia.
1891—Norton, Claude R., M.D., 700 N. 40th St., Philadelphia.
1898—Palen, Gilbert J., M.D., Walnut Lane and Germantown Avenue, Philadelphia.
1896—Palmer, Charles R., M.D., West Chester.
1884—Parker, G. W., M.D., 1404 S. 6th Street, Philadelphia.
1883—Parker, T. Elwood, M.D., Woodbury, N. J.
1870—PARSONS, ANSON, M.D., Springboro.
1881—Parsons, E. C., M.D., 275 Walnut Street, Meadville.
1897—Paxson, O. H., M.D., 123 N. 16th St., Philadelphia.
1880—Peach, William, M.D., 58 Monterey Street, Allegheny.
1881—Perkins, C. W., M.D., 403 Broad Street, Chester.
1894—Peters, J. Elwood, M.D., Jenkintown.
1883—Pettengill, Eliza F., M.D., 300 N. 10th St., Philadelphia.
1891—Phillips, Joseph R., M.D., 15 E. 8th Street, Erie.
1897—Piper, R. L., M. D., Tyrone.
1880—Pitcairn, Hugh, M.D., 206 State Street, Harrisburg.
1895—Pitcairn, R. C., M.D., 5518 Ellsworth Avenue, Pittsburg.
1894—Pollock, Martha H., M.D., 210 Pine Street, Harrisburg.
1891—Pond, Edward H., M.D., 2041 Wylie Avenue, Pittsburg.
1886—Posey, L. P., M.D., 1435 Walnut Street, Philadelphia.
1896—Powel, Franklin, M.D., Chester.
1883—Powell, W. C., Jr., M.D., Bryn Mawr.
1871—PRATT, TRIMBLE, M.D., Media.
1896—Pursell, James P., M.D., Easton.
1872—RANKIN, J. S., M.D., 827 S. Negley Avenue, Pittsburg.
1897—Raue, C. Sigmund, M.D., 121 N. 10th St., Philadelphia.
1883—Reading, J. H., M.D., 1811 Green Street, Philadelphia.
1886—Reading, L. W., M.D., 1629 Green Street, Philadelphia.

1888—Reading, Thomas, M.D., Hatboro.
1896—Redman, John L., M.D., 1336 Spruce Street, Philadelphia.
1886—Reeves, Joseph M., M.D., 1609 Mt. Vernon St., Philadelphia.
1896—Ridge, Jonathan T., M.D., 1617 N. 7th Street, Philadelphia.
1878—RINEHART, C. C., M.D., Center and Neville Aves., Pittsburg.
1894—Rinehart, S. M., M.D., 293 Western Avenue, Allegheny.
1895—Roberts, C. W., M.D., Scranton.
1880—Robson, J. W., M.D., 350 Winebiddle Avenue, Pittsburg.
1883—Rosseau, L. G., M.D., 118 S. Negley Avenue, Pittsburg.
1894—Rotzell, W. E., M.D., Narberth.
1888—Sandel, J. H., M.D., 49 Center Avenue, Plymouth.
1872—SARTAIN, HARRIET J., M.D., 212 W. Logan Square, Philadelphia.
1896—Schantz, Henry F., M.D., 402 N. 5th Street, Reading.
1892—Schantz, M. Margaret Hassler, M.D., Reading.
1874—SCHMUCKER, F. R., M.D., 228 N. 5th Street, Reading.
1883—Schreiner, Emma T., M.D., cor. Wayne and Maplewood Avenues, Germantown, Philadelphia.
1889—Schwenk, C. S., M.D., 1319 Jefferson Street, Philadelphia.
1886—Seibert, W. A., M.D., 43 N. 4th Street, Easton.
1868—SEIP, C. P., M.D., 636 Penn Avenue, Pittsburg.
1889—Shallcross, I. G., M.D., 1631 Arch Street, Philadelphia.
1879—Shannon, S. F., M.D., 631 16th Street, Denver, Col.
1883—Sharkey, W. P., M.D., 1938 Girard Ave., Philadelphia.
1885—Shellenberger, C. N., M.D., 1831 Wallace St., Philadelphia.
1895—Shepherd, Mary A., M.D., Scranton.
1892—Shoemaker, D. W., M.D., 1924 Green St., Philadelphia.
1897—Simmons, S. S., M.D., Susquehanna.
1883—Slough, F. J., M.D., 845 Hamilton Street, Allentown.
1892—Smedley, Charles D., M.D., Wayne.
1889—Smith, George W., M.D., 806 N. Broad St., Philadelphia.
1887—Smith, Mary E., M.D., 48 E. Diamond Street, Allegheny.
1887—Snader, E. R., M.D., 140 N. 20th Street, Philadelphia.
1894—Somerville, W. H., M.D., 1214 Hanover St., Philadelphia.
1896—Spahr, Charles E., M.D., York.
1889—Spencer, William, M.D., 1820 Chestnut Street, Philadelphia.
1881—Stambach, H. L., M.D., 15 W. Victoria St., Santa Barbara, Cal.
1889—Starr, Pearl, M.D., 583 Lincoln Avenue, Bellevue.
1894—Steele, William G., M.D., 1431 Girard Avenue, Philadelphia.
1891—Stephens, W. R., M.D., Wilkinsburg.
1894—Stewart, G. W., M.D., 1728 Chestnut Street, Philadelphia.
1885—Strong, J. Wilmer, M.D., 2049 N. 13th St., Philadelphia.

1889—Strong, Walter, M.D., 2049 N. 13th St., Philadelphia.
1896—Sureth, Theodore, M.D., Scranton.
1881—Thatcher, J. W., M.D., 35th and Hamilton Sts., Philadelphia.
1877—THOMAS, CHARLES MONROE, M.D., 1623 Arch St., Phila.
1886—Thompson, J. H., M.D., 515 Penn Avenue, Pittsburg.
1897—Thompson, J. J., M.D., Carbondale.
1887—Thompson, Landreth W., M.D., 1701 Green Street, Phila.
1898—Thurston, Leon, M.D., Pittsburg.
1886—Tindall, Van R., M.D., 323 Reed Street, Philadelphia.
1891—Tomlin, R. E., M.D., 2057 N. 8th Street, Philadelphia.
1896—Tortat, Albin E., M.D., 3727 Ridge Avenue, Philadelphia.
1896—Trites, Charles S., M.D., 4500 Baker St., Manayunk, Phila.
1896—Ulrich, Silvester, M.D., Middletown.
1881—Umstead, D. B., M.D., Tacony, 23d Ward, Philadelphia.
1883—Van Baun, W. W., M.D., 1402 Spruce Street, Philadelphia.
1886—Van Deusen, Edwin H., M.D., 2105 Tioga St., Philadelphia.
1896—Van Lennep, G. A., M.D., 1421 Spruce Street, Philadelphia.
1881—Van Lennep, W. B., M.D., 1421 Spruce St., Philadelphia.
1898—Van Tine, J. Lewis, M.D., 1613 Girard Avenue, Philadelphia.
1889—Vischer, Carl V., M.D., 1429 Poplar Street, Philadelphia.
1892—Waggoner, G. W., M.D., Corry.
1897—Walter, J. A., M.D., Punxsutawney.
1896—Walter, Robert, M.D., Walter's Park.
1894—Ward, J. D., M.D., 806 S. 3d Street, Philadelphia.
1894—Ware, H. B., M.D., cor. Washington and Linden Streets, Scranton.
1894—Wasserman, Flora E., M.D., 1909 N. Broad St., Philadelphia.
1894—Waylan, Julia Gould, M.D., 1832 Tioga St., Philadelphia.
1881—Weaver, Chandler, M.D., Fox Chase, 23d Ward, Phila.
1894—Weaver, H. S., M.D., 1621 Chestnut Street, Philadelphia.
1883—Weaver, W. P., M.D., Bristol.
1894—Webster, Samuel C., M.D., Media.
1891—Wesner, M. A., M.D., Houtzdale.
1889—White, Roland T., M.D., 273 Western Avenue, Allegheny.
1892—Wilbur, B. K., M.D., Sitka, Alaska.
1899—Wilford, H. H., M.D., Bangor.
1866—WILLARD, L. H., M.D., 236 Western Ave., Allegheny.
1870—WILLETS, WILLIAM, M.D., Williamsport.
1873—WILLIAMSON, M. S., M.D., 1311 Arch St., Philadelphia.
1886—Wilson, C. A., M.D., San Antonio, Texas.
1887—Wolfe, W. W., M.D., 35 N. Diamond Street, Allegheny.
1897—Yetter, A. F., M.D., Moscow.

1888—Yocum, C. A., M.D., 365 Chestnut Street, Pottstown.
1880—Yoder, D., M.D., Catasauqua.
1896—Youngman, Maurice D., M.D., Atlantic City, N. J.
1894—Ziegenfus, A. Frank, M.D., 1124 Wallace St., Philadelphia.

HONORARY MEMBERS.

1883—Allen, H. C., M.D., 5401 Jefferson Street, Hyde Park, Chicago, Ill.
1898—Custis, J. B. Gregg, M.D., 110 E. Capitol Street, Washington, D. C.
1866—Doran, Charles R., M.D., Jacksonville, Fla.
1868—Helmuth, William Tod, M.D., 158 W. 59th St., New York.
1885—Houghton, Henry C., M.D., 12 W. 39th St., New York.
1876—Jones, S. A., M.D., Ann Arbor, Mich.
1868—Paine, H. M., M.D., West Newton, Mass.
1883—Phillips, W. A., M.D., Cleveland, Ohio.
1898—Porter, Eugene H., M.D., 181 W. 73d Street, New York.
1868—Rockwith, F. A., M.D., East Saginaw, Mich.
1892—Williamson, Alonzo P., M.D., Dayton Bldg., 602 Nicollet Ave., Minneapolis.

CORRESPONDING MEMBERS.

1873—Alvarez, Paz, M.D., Madrid, Spain.
1873—Chauvet, Fernand, M.D., Tours, France.
1873—Eidherr, Francis, M.D., Vienna, Austria.
1883—Hughes, Richard, M.D., Brighton, England.
1873—Pope, Alfred C., M.D., London, England.

NECROLOGICAL LIST.

1866—Ashton, A. H., M.D., died February 18th, 1883.
1866—Barnaby, John E., M.D., died January 5th, 1869.
1867—Barrett, Charles B., M.D., died June 5th, 1871.
1882—Bernard, H., M.D., died ———
1866—Blakeley, W. James, M.D., died January 14th, 1877.
1870—Bratt, Benjamin R., M.D., died January 31st, 1872.
1895—Brierly, Frank Walter, M.D., died June 17th, 1899.
1866—Brooks, Silas S., M.D., died July 2d, 1871.
1883—Brown, Samuel, M.D., died March 22d, 1892.
1885—Buchman, Francis, M.D., died July 14th, 1898.
1883—Burr, Richard, M.D., died March 30th, 1885.
1873—Caruthers, R. E., M.D., died January 3d, 1885.
1868—Charlton, S. T., M.D., died November 9th, 1886.
1863—Childs, William R., M.D., died November 11th, 1888.
1866—Cook, William H., M.D., died March 11th, 1879.
1866—Cooper, John F., M.D., died August 19th, 1899.
1866—Cote, M., M.D., died May 29th, 1878.
1866—Cowley, David, M.D., died October 30th, 1886.
1868—Dake, J. P., M.D. (honorary), died October 28, 1894.
1866—Detweiler, Henry, M.D., died April 21st, 1887.
1886—Dowling, John W., M.D. (honorary), died January 14th, 1892.
1871—Dreibelbis, David L., M.D., died March 24th, 1872.
1870—Earhart, Jacob R., M.D., died June 23d, 1891.
1870—Farrington, E. A., M.D., died December 17th, 1885.
1880—Ferson, John L., M.D., died July 12th, 1896.
1866—Freise, Michael, M.D., died February 4th, 1880.
1866—Frost, J. H. P., M.D., died January 21st, 1875.
1866—Gardiner, Richard, M.D., died March 22d, 1877.
1866—Gause, O. B., M.D., died January 11th, 1895.
1886—Griffith, Jethro J., M.D., died July 5th, 1893.
1877—Grumbeid, William, M.D., died———
1866—Guernsey, H. N., M.D., died June 27th, 1885.
1870—Guernsey, W. F., M.D., died February 16th, 1877.
1895—Hall, William D., M.D., died August 2d, 1897.
1888—Hawley, S. B., M.D., died March 6th, 1890.
1886—Herron, James A., M.D., died November 15th, 1868.
1866—Hofmann, Herman H., M.D., died April 4th, 1891.

1886—Holcombe, John Randolph, M.D., died December 17th, 1896.
1884—Hosfeld, George, M.D., died November 9th, 1884.
1873—Houard, J. G., M.D., died April 24th, 1878.
1882—Ivins, Horace F., M.D., died January 1st, 1899.
1866—James, David, M.D., died June 6th, 1873.
1866—Jeanes, Jacob, M.D., died December 18th, 1877.
1866—Koch, Augustus W., M.D., died May 4th, 1886.
1889—Lazear, Lyttleton L., M.D., died ——— 1898.
1866—Lee, J. K., M.D., died November 10th, 1887.
1869—Lee, John K., M.D., died May 31st, 1889.
1876—Lilienthal, S., M.D. (honorary), died October 3d, 1891.
1867—Lippe, Adolph, M.D., died January 23d, 1888.
1871—Lovejoy, E., M.D. (honorary), died August 15th, 1872.
1868—Malin, George W., M.D., died January 18th, 1883.
1886—Malin, John, M.D., died November 29th, 1889.
1866—Marsden, J. H., M.D., died August 27th, 1883.
1865—Martin, Henry Noah, M.D., died September 1st, 1889.
1881—May, Newton, M.D., died January 27th, 1889.
1866—McClatchey, R. J., M.D., died January 15th, 1883.
1870—Moore, Thomas, M.D., died March 25th, 1882.
1867—Morgan, John Coleman, M.D., died June 27th, 1899.
1873—Nichol, Thomas, M.D. (corresponding), died June 14th, 1890.
1869—Ostrander, W. M., M.D., died August 23d, 1881.
1868—Payne, Wm. E., M.D. (honorary), died March 9th, 1877.
1878—Pereira, Ignacio, M.D. (corresponding), died April 18th, 1881.
1868—Pfoutz, J. S., M.D., died ———
1866—Preston, Coates, M.D., died August 9th, 1881.
1868—Pulte, J. H., M.D. (honorary), died February 24th, 1884.
1882—Pursel, J. E., M.D., died March 15th, 1885.
1872—Rankin, John Stephen, M.D., died April 21st, 1899.
1866—Raue, Charles G., M.D., died August 21st, 1896.
1853—Reading, Edward, M.D., died March 7th, 1889.
1866—Reading, John R., M.D., died February 14th, 1866.
1870—Reinhold, H. E., M.D., died March 6th, 1879.
1871—Rittenhouse, S. R., M.D., died June 26, 1895.
1866—Roberts, R. Ross, M.D., died April 4th, 1875.
1887—Rodes, Joseph, M.D., died ———, 1898.
1866—Rosseau, L. M., M.D., died September 25th, 1882.
1872—Scott, James L., M.D., died August 15th, 1876.
1883—Skeels, James S., M.D., died ——— 1891.
1880—Smedley, Isaac G., M.D., died December 1st, 1899.
1870—Spencer, J. H., M.D., died ———

1872—Speth, W. F., M.D., died May 11th, 1881.
———Stauffer, D. R., M.D., died March 16th, 1874.
1867—Stevens, C. A., M.D., died January 17th, 1881.
1868—Talbot, I. Tisdale, M.D. (honorary), died July 2d, 1899.
1870—Taudte, F., M.D., died March 27th, 1878.
1871—Thomas, Amos R., M.D., died October 31st, 1895.
1891—Tindall, Harry Brooks, M.D., died January 9th, 1892.
1882—Trites, W. B., M.D., died January 19th, 1890.
1867—Walker, Mahlon M., M.D., died March 31st, 1896.
1870—Waters, George H., M.D., died ——— 1892.
1880—Way, J. H., M.D., died September 3d, 1887.
1866—Williams, Thomas C., M.D., died October 1st, 1899.
1866—Williamson, Walter M., M.D., died December 19th, 1870.
1866—Williamson, Walter, M.D., died May 5th, 1874.
1848—Wood, James B., M.D., died April 14th, 1889.
1874—Young, J. H., M.D., died June 21, 1894.
1880—Zerns, Wm. M., M.D., died September 21st, 1887.

MEMBERS AND VISITORS REGISTERED AT THE MEETING.

T. Louis Adams.
John V. Allen.
Richard C. Allen.
W. S. Ambler.
Joseph Aschman.
B. G. Arnold.
A. B. Arthur.
Hon. Samuel H. Ashbridge.
L. T. Ashcraft.
George F. Baier.
A. E. Baily.
B. H. Bainbridge.
W. I. Baker.
W. L. Barris.
Clarence Bartlett.
Clyde Edwin Barton.
Weston D. Bayley.
J. E. Belville.
B. F. Betts.
G. H. Bickley.
W. H. Bigler.
J. D. Boileau.
E. E. Bostick.
A. P. Bowie.
B. Bowman.
T. L. Bradford.
Mary Brewer.
E. W. Brickley.
O. C. Brickley.
Alice Kershaw Brown.
C. Sheble Brown.
S. G. A. Brown.
William T. Bruce.
Margaret E. Burgess.
F. W. Burlingame.
T. H. Carmichael.
W. D. Carter.
J. P. Cheesman.
G. M. Christine.
Anna C. Clarke.
James Clifford.
Mary A. Cooke.
John W. Coolidge.
Isaac Cooper.
Isaac Crowther.
Hannah S. Cullen.
Violet B. Cullen.
William D Culin.
J. M. Danforth.
Sara Davies.
Fullerton J. Douglas.
Pemberton Dudley.
Perry H. Dudley.
P. S. Duff.
Anna E. Dumont.
Edward S. Dungan.
Thomas S. Dunning.
Percy H. Ealer.
Harvey Farrington.
Prudence Fenniman.
Charles J. V. Fries.
Joseph M. Gerhart.
Joseph M. Gerhart. Jr.
I. B. Gilbert.
T. P. Gittens.
Ella D. Goff.
S. G. Godshall.
Edward M. Gramm.
Theodore J. Gramm.
Anna E. Griffith.
L. B. Griffith.
Silas Griffith.
William M. Griffith.
J. C. Guernsey.
B. B. Gumpert.
George H. Haas.
C. F. Hadley.
O. S. Haines.
P. S. Hall.
D. W. Harner.
J. E. Harner.
R. J. Harris.
J. Allen Harrison.
J. W. Hassler.
L. H. Hendrixson.
A. C. Heritage.
E. H. Hill.
William B. Holcomb.
C. H. Holden.
L. Hoopes.
Charles H. Hubbard.
G. Wogan Hurst.
T. C. Imes.
R. F. Jackson.

Bushrod W. James.
D. B. James.
John E. James.
G. C. Jenkins.
H. I. Jessup.
H. A. Lacy.
A. H. Laros.
J. S. Laros.
T. Livezey Laughlin.
F. Mortimer Lawrence.
H. P. Leopold.
A. B. Lichtenwalner.
William H. Lyle.
B. Frank Kehler.
A. L. Kistler.
D. C. Kline.
W. W. Knowlton.
Aug. Korndœrfer, Jr,
Aug. Korndœrfer, Sr.
E. A. Krusen.
J. H. McClelland.
Eliza Lang McClure.
W. McGeorge.
D. P. Maddux.
Harry K. Mansfield.
Anna M. Marshall.
H. Joline Martin.
Robert Wilkie Martin.
W. J. Martin.
Harry I. Meily.
A. F. Menell.
Edward W. Mercer.
Robert P. Mercer.
C. S. Middleton.
Z. T. Miller.
E. W. Mitchel.
J. Nicholas Mitchell.
C. Mohr.
George B. Moreland.
G. A. Mueller.
M. L. Munson.
C. R. Norton.
G. J. Palen.
T. E. Parker.
C. W. Perkins.
R. C. Pitcairn.
W. C. Powell.
B. F. Raleigh.
J. H. Reading.
L. Willard Reading.
John L. Redman.
C. C. Rinehart.
S. M. Rinehart.
A. E. Roberts.
A. E. C. Russell.
S. N. Sappington.
N. A. Saylor.
H. F. Schantz.
M. Margaret Schantz.
F. R. Schmucker.
L. A. Schollenberger.
Emma T. Schreiner.
C. S. Schwenk.
William A. Seibert.
I. G. Shallcross.
John R. Sharp.
E. S. Sharpless.
C. T. Shinn.
D. W. Shoemaker.
George W. Smith.
Henry M. Smith.
Edward R. Snader.
W. H. Somerville.
Charles Spahr.
William Spencer.
John G. Sperling.
William G. Steele.
G. W. Stewart.
H. Knox Stewart.
Walter Strong.
Robert S. Summers.
Charles M. Thomas.
E. C. Thomas.
Landreth W. Thompson.
Leon Thurston.
Van R. Tindall.
R. E. Tomlin.
Kerr Boyce Tupper, D.D., LL.D.
William W. Van Baun.
Edwin H. Van Deusen.
G. A. Van Lennep.
William B. Van Lennep.
J. L. Van Tine.
Carl V. Vischer.
Oliver B. Wait.
John D. Ward.
J. M'E. Ward.
H. B. Ware.
E. C. Wasmann.
Flora E. Wassermann.
Julia Gould Waylan.
Chandler Weaver.
H. S. Weaver.
George C. Webster.
Franklin E. Williams.
C. A. Yocom.
A. Frank Ziegenfus.

PAPERS

AND

DISCUSSIONS.

REPORT OF THE SECTION OF SURGERY.

Preliminary Remarks in Surgery, by G. Maxwell Christine, M.D.
The Treatment of Hypertrophy of the Prostate, by L. T. Ashcraft, M.D.
Catheterization, by J. W. Coolidge, M.D.
Uses of Intravenous Injections of Saline Fluids, by J. W. Hassler, M.D.
Potentized Medicines in Septic and Other Conditions, by Malcolm Macfarlan, M.D.
Gastrostomy for Benign Stricture of the Œsophagus, by H. L. Northrop, M.D.
The Treatment of Surgical Shock, by R. C. Pitcairn, M.D.
Orificial Surgery, by W. G. Steele, M.D.
Some Unusual Abdominal Cases, by Walter Strong, M.D.
The Operative Treatment of Tetanus, by L. W. Thompson, M.D.
Wounds of the Abdomen, with Report of a Case, by G. A. Van Lennep, M.D.
Surgery of the Gall-Bladder, by W. B. Van Lennep, M.D.

PRELIMINARY REMARKS IN SURGERY.

G. MAXWELL CHRISTINE, M.D., PHILADELPHIA.

The history of surgery as a branch of the healing art is one of great achievements. Its contributions to the forces that assist in the restoration of health and the preservation of life have many times inaugurated epochs in human advancement; and it is probable that the further progress of civilization will be characterized by just as important developments in surgical theory and practice as in the past. Naturally, one wonders how it will be possible for the future to furnish anything new in this direction, since surgery has apparently become well-nigh perfect. The past fifty years in particular have projected into the surgical field so much that is startling in its momentousness that, did we not pause and ponder well over the subject before expression of opinion, we might doubt that our art had yet anything to glean from the future. But the goal toward which progress is aiming is probably no nearer in surgery than in other departments of human efforts, and we must therefore look forward with anticipation born of the thought that the ratio of advancement in all things human is to be observed without abatement, if not with increase of energy, to the end.

Though this is not the last year of the century, it is so close to it that it will not be amiss to indulge in a little retrospection, in an off-hand manner, not for detailed statement, but for that generalization which precedes and prefaces the more thorough relation.

Mindful of the contributions to surgery in the centuries since the days of the physicists, and cognizant of the skill of even the ancient operators in surgery, it is nevertheless within the limits of truth to aver that the surgery of to-day is the product of the nineteenth century, and as such we, who live under its beneficent reign, need no excuse for the pride which wells up within us, and for the unspeakable joy we experience as participants.

Medicine in its other branches has not been holding itself in abeyance while surgery has been taking such strides, but has kept pace with it, though in a much quieter manner, and with results perhaps not quite so immediate though equally admirable. Specializing themselves, surgery and general medicine developed along rather distinct lines. Surgery seemed to occupy the higher sphere, for it took up the work where medicine laid it down and ostensibly confessed its inability. It thus became a form of last resort, and a species of jealousy on the part of each made correlation awkward. This possibly explains the antipathy at one time existing between the general practitioner and the surgeon. It will be a part of our legacy to another century to finish the process of harmony set in motion the last few years, so that the various departments of medicine may labor together with a common interest.

No definition has yet made clear the distinction between the two departments we denominate surgery and medicine. In viewing extremes it is easy to see the difference between the art that cuts off a limb and that which administers a dose of high potency; but as we approach the means we find the line of demarcation indeterminate, and we falter in our definition, and likewise in our understanding. Division of labor, and the consequent increase of knowledge and skill thus attainable, have justified the apparent separation of the two, and the determination of each to work out their problems along separate lines of action. It has inured to the benefit of both, but un-

fortunately the actual interdependence of the surgical and the medical, and the impossibility of absolute or even temporary separation, did not appeal effectually to the workers in these branches until many long years of antagonism, or, to say the least, want of harmony, had retarded progress. Even now we have the spectacle of two sets of medical men arraying themselves, one on the side of curing by medicine alone and the other with the application of none but surgical principles. This battle for principles and supremacy wages less to-day, however, than ever. Civilization has brought with it enlightenment, and both surgery and medicine may be trusted not to be remiss in their acceptance of the truth, nor lacking in zeal in their search after it. Evidently that which is medical cannot be altogether surgical, and *vice versa*. There is, however, a truly surgical and a truly medical, and, demonstrably, a medico-chirurgical. Manifestly, therefore, it is impossible to draw a straight and fixed line between medicine and surgery with any hope of permanency. Like the Chinese wall it may subserve some purpose for the day of its creation, but it may prove to be just as absurd in the view of the future generation as we now regard that monument of ancient folly.

The fact is, surgery and medicine are handmaids with inseparable purpose and communion of interests. The conclusion is inevitable that there should be copartnership of effort.

That surgery should endeavor to get along without aid from medicine is only natural. The field invited special research and investigation, and surgery invaded it promptly and fearlessly. Reliant on its own resources, it attempted the invasion alone. It is gradually removing this handicap, much to the general advantage.

The spirit of conservatism now making itself felt is only another expression of the fact that in the past surgery attempted too much, and that the bitter lessons thus taught have caused a reaction which is restraining the knife while more room and greater opportunity are given for the application of the indicated remedy. Surgery has had three problems to solve: First, to obtain the knowledge of how to operate; second, when to operate; and third, when not to operate. It has not altogether

solved these problems, but has fairly well established a record for the first; for the second, it has laid down a somewhat satisfactory set of rules; and for the third, more than a shade different from the second, we have yet much to hear. The development of method and skill is, of course, the great desideratum in surgery, but it must not hide nor overwhelm the ever-burning question of how to succeed in curing disease without the aid of the knife. Gynæcology is leading the way in causing surgeons to think before they act, and to exhaust the employment of every possible agent for cure before resorting to operation.

In the surgery of cancer, as of the breast, we find the sweep of the surgeon's knife growing daily broader and deeper as men become more bold and the outlines of the disease are more clearly outlined, but that does not halt the investigation going on into the means by which the disease may be stayed or cured without this awful loss of tissue and this fearful mutilation.

To-day we are called together to record the labors of ourselves and others in the surgical field, to recount experiences, to compare notes, and in various ways to add to our knowledge and skill.

This is no easy task, which only adds to the manifestness of our duty. The responsibility should impress us with its importance, and stamp our proceedings with commensurate seriousness.

Lately much has been written of "The right of man to die." Endeavor has been made to teach us that "Doctors and nurses have positively no right to prolong life in cases of persons ill with an incurable disease." Fortunately, the advocates of this folly stopped short of suggesting that we actually kill our patients under such circumstances. We are privileged to amend this expression and make it read, "The right of man to live." Time and experience have proven that which is called an incurable disease to be a variable quantity. It is one thing to-day and another to-morrow. Like all else, it yields in time to the touch of man's genius. It is one of life's greatest problems, but its solution is certain, although perhaps a long way off.

Not only has man the right to live, and, to do so, to command

our services, but he has the right to live in the enjoyment of normal health, strength and form. That which tends to remove man from the normal condition, whether it be a simple disturbance of function or some grave pathological change, should be, and eventually will be, amenable to the laws of our science and art.

From the mole on our cheek to the hunch on the crippled back, deformity will yield to some influence of which we are the master. From the scratch of a pin to the devastating ravages of an epithelioma; from lumbago to an abscessed kidney; from a coryza to a frontal abscess, the profession of medicine in some of its departments will be able to offer a cure. We can never falter as long as disease in any of its forms confronts us.

Now, what has surgery done, in the century nearly closed, in fulfillment of the trust imposed in it?

Up to the nineteenth century surgery seems to have been a contest between light and dark, with only here and there a victory of the former over the prejudice and ignorance of the latter. We cannot avoid admiring the stupendous results of the period dating back to 3000 B.C., and ending 1800 A.D. The recital of events in the evolution of surgery through ancient to modern history amazes us; yet when we compare them with that which has been accomplished during the present one hundred years, we ascertain that it was all simply formative. The elements of basic construction were being fashioned in all those long centuries of years. Systematic arrangement had hardly been attempted. Surgery was in no condition to rise to the distinction of a science. The struggle went on, however, with a vigor that gave hope and inspiration to those engaged in it. Great intellects were gradually taking their place in the surgical areas, evolving surgical principles, testing them, recording the results, and making ready for the co-ordination given life by the events of the nineteenth century.

In 1800 there was not much open to the view in surgery. Schools were private; instruction limited; apprenticeship restricted; and the outlook for the prospective surgeon gloomy. Gradually educational methods took the place of desultory in-

struction. Wonderful service was obtained from anatomy and the various collateral branches which now began to receive new life and impetus. Histology and pathology grew as microscopy developed; physiology and chemistry, not to be outdone, revealed their secrets and served surgery to good purpose. Science, art and literature vied with each other to lend it aid. The gradual unfolding of the germ theory of disease, and the determination of its relation to inflammation and suppuration, were most valuable contributions to surgery. None the less important was the result of the studies concerning tissue repair which settled the question that its processes and those of inflammation were different. Prior to this period the surgeon had great difficulty in getting his wounds to heal, for which he had inadequate reasons to offer, and, worst of all, no remedy. Running sores, gaping and suppurating wounds, rotting flesh, gangrene, like relentless foes stalked before him. But the long looked for rift in the clouds was soon to let in the light of a new discovery. Lister came to end the "curse of centuries." Though his views have undergone revision, they revolutionized operative work and formed the basis for our present knowledge of wound treatment. It was one of the most important epochs in the history of surgery. It was what the former centuries earnestly sought but never found. The causes of sepsis understood, and the means whereby it could be avoided pointed out, surgery took an enormous bound—indeed, the greatest in its history, unless we except the introduction of anæsthetics. It is difficult for us to comprehend the transition from the pre-anæsthetic to the anæsthetic period. It is like the transformation from the Inquisition to the mercies of the tenderest of human sympathies. The one is the most horrible —the other the most merciful. Surgery is ever seeking after the most merciful.

We cannot enter into the various other steps which have characterized this century in regard to surgery, but we may go over some of the names which have made it illustrious, and whose labors have been such that their mere mention reminds us of the debt we owe them.

I will read them nearly in the order they appear in an article

on the "History of Surgery," by one of our esteemed colleagues, and I am sure that they will arouse in you the same reverential awe they did in me as I pondered over their masterful labors. William Hunter, Cruikshank, Mayo, Shaw, Brodie, Charles Bell, Hawkins, Cooper, Hutchinson, Wardrop, Brodie, Teale, Colles, Bellingham, Coulson, Teevan, Cock, Blizard, Hilton, Monroe, Lizars, Liston, Syme, Ferguson, Guthrie, Lister, Dupuytren, Roux, Delpech, Lisfranc, Sourbedielle, Civiale, D'Etoilles, Hourteloup, Velpeau, Lanzier, Jobert, Amussat, Vidal, Gensoul, Pravaz, Malgaigne, Nelaton, Broca, Sedillot, Scarpa, Rizzoli, Kern, Wattman, Schuh, Walther, Textor, Jaeger, Hesselbach, Langenbeck, Stromeyer, Rust, Graefe, Dieffenbach, Middeldorf, Chelius, Hueter, Linhart, Pitha, Lucke, Billroth, Burns, Langenbeck, Simon, Volkmann, Pirogoff, Warren, Dorsey, M'Dowell, Rogers, Megill, Gibson, Nathan Smith, Mott, Buck, M'Clellan, Norris, Horner, Barton, Hayward, Bigelow, Parker, Sime, Wood, Hamilton, Van Bueren, Sands, Atlee, Goodell, Gross, Pancoast, Agnew, Levis.

Added to these are the names of those living whose work has not ended, but of whose value we may safely allow the future to be the judge.

Would we wish to live in the forepart of the century without the facilities we now possess for operating, without the skill with which the modern surgeon is blessed, without the technique so important a part of our work, without our laboratories, without our knowledge in histology, pathology and bacteriology? Would we go back to the days when anæsthesia was unknown and subject our patients to the barbarities, even if in the name of surgery, to which they were necessarily subjected in those days?

So much for the past. As to what the future will bring us, no one can tell. Doubtless the next few years will witness strenuous efforts to improve in methods, and to enlarge the scope of surgery. The brain, spine, liver, lungs, stomach, heart, and the sympathetic nervous system offer splendid opportunities for the future, and already we find marked activity in these directions. Controversy still goes on respecting the anæsthetics, and as the operator fears these more than he does the knife,

it behooves the profession to finish its investigations on anæsthesia so that it will become less dangerous, owing to improvement in method of administration, or by the discovery of an equally valuable but less dangerous substitute for the substances we now employ.

The use of antiseptics will be relegated, no doubt, to the particular service they are intended to render, and allowed to come no closer to the wound than is absolutely required. This is a subject not clearly understood, but as time goes on pathogenic germs will so lessen in number and virulence as to make the use of antiseptics less requisite. Then will we have reached nearer to the ideal—asepsis.

The transplantatlon of skin is, perhaps, only a forerunner of the transplantation of other parts of the body to supply deficiency. Lately, an ovary was transplanted from one patient to another, with complete restoration of function in the woman thus rehabilitated. It will not be asking too much of surgery to extend this principle to the refurnishing of other parts of the human body. The marvellous has not yet reached its limit.

If cancer can be proven to be infectious, and a parasite discovered to be the cause, practical surgery will be greatly advanced. It will upset ingenious theories as to an embryonic matrix, but it will furnish a suggestion for cure that our present knowledge does not.

One of the bugbears of surgery is hæmostasis. Some other method than the present treacherous one of ligature, so liable to slip and infect, will be hailed with delight. Electro-hæmostasis is now receiving a trial, and has its adherents, who claim for it superiority over other forms.

Electricity as a therapeutic agent has endeavored to get a foothold in surgery, but apparently with little success. There are those who are loud in their praise of its value in the treatment of fibroids and other tumors. Just now the acerbity of the contention between the advocates of the knife and those of electricity makes the subject one at least of interest. It would seem that the future ought to make electricity more subservient to the needs of surgery than has been the case.

The use of the various serums in the treatment of septicæmia,

tetanus, etc., has already advanced far enough to enable us to have faith in them as curative agents. Here, too, is a large field for future investigation.

Spinal surgery has not taken the advanced position which that of the brain has assumed, but is fast approaching it. Orthopœdics is quietly but effectually working out the problem in this inviting branch of surgery, and the next few years will witness the evolution of a distinct surgery of the spine, as we already have a surgery of the brain.

The X-ray must come in for a word or two. It has made the diagnosis and treatment of fractures, dislocations and foreign bodies easier and more certain. It has been one of the greatest discoveries of modern times, and has become indispensable. Its use in the diagnosis of pulmonary tuberculosis, empyæmas and calculi, enhances its value to the medical man. Because of its relation to the legal aspect of our profession, the teaching of the X-ray ought to be a part of the curriculum of every medical college.

Exploration of the ureters and pelves of the kidneys, made comparatively easy by recent devices, suggests that the same or similar methods might be pursued relative to the Fallopian tubes. Though this is a subject for the gynæcologist, general surgery is equally interested in all its departments.

Through all that which the nineteenth century has done in surgery, through the dark hours of the first few years, through the experimental stages of the periods of anæsthesia, antisepsis and the Roentgen ray, the surgeon has sought only the good of his patient. Vivisection on the lower animals has given him a means for testing his theories, and when finally applied to the human being, they had already been demonstrated beyond peradventure. This has been particularly true in the field of tuberculosis, diphtheria, and operative work of various kinds, especially intestinal anastomosis. Vivisection should be encouraged in our colleges under legal restrictions. If introduced under legal protection, it would be a profit not only to physiological study, but also to the surgical. At present, its employment is practically surreptitious.

While surgery is being pushed forward with all the possible

enthusiasm of its devotees, the materia medica must not be lost sight of, and it is largely in this direction that this paper would enter a plea for a more thorough union of the two arts in the one man than often happens. The old story of the gynæcologist who diagnosed uterine disease in all his patients, male and female, may be a libel, but it conveys the moral that devotion in one line of thought and action may estrange us from the truth as it comes from other sources. Medicine and surgery should go hand in hand in the furtherance of the high and noble purposes of our profession.

May the coming years be contributions to the means by which surgery will accomplish its aims with the least inconvenience, pain and shock to the patient, with the loss of the least possible tissue, and with a constantly diminishing mortality. The past hands over to the future volumes upon volumes of recorded fact. The future may multiply these over and over, but it will do so only by the kind of close study, thought and investigation so characteristic of the century now almost closing.

THE TREATMENT OF HYPERTROPHY OF THE PROSTATE.

BY L. T. ASHCRAFT, A.M., M.D., PHILADELPHIA.

One is safe, I think, in asserting that prostatic hypertrophy rivals gonorrhœa as the "black sheep" of the flock of diseases which attack the genito-urinary canal. In order to arrive at a distinct understanding of the disease and the complications which grow out of it—the factors, after all, to be considered, and for which we treat—it becomes necessary to review the anatomy of this organ, and to point out the relationship to the other organs of the urinary channel.

The prostate is a firm, musculo-glandular organ, situated at the base of the bladder, surrounding the prostatic urethra. Its shape has been likened unto that of a horse-chestnut; its base points upwards and backwards towards the rectum, through

which it may be felt; its apex points downward and forward, towards the sub-pubic fascia. It is held in position by the pelvic fascia. The normal prostate measures one and one-half inches transversely at its base and about one inch vertically in the direction of the urethra; it is one-half of an inch in thickness. Externally the gland appears to be made up of a single lobe, but dissection reveals two lateral lobes connected by a musculo-fibrous band. In old men this is frequently found hypertrophied, forming a third lobe, which often projects into the bladder, causing an obstruction to the flow of urine. Structurally the prostate is composed of unstriped muscular fibres and fibrous tissue, in which are lodged masses of small racemose glands; its muscular fibres are continuous above with the muscular coat of the bladder walls; those below are arranged circularly around the vesical orifice of the urethra, and assist in forming the sphincter vesicæ. They are continuous with the membranous portion of the urethra. The gland is surrounded by a firm, fibrous capsule, the unyielding nature of which serves to explain the severe pain occasioned by prostatic inflammation. The glands are numerous, constituting a large portion of the organ, being composed of a series of tubular alveoli, which open into elongated excretory ducts, lined with columnar epithelium; they are connected by fibrous expansions from the external capsule. The blood-supply of the prostate is derived from the vesical, inferior hæmorrhoidal and pudic arteries; the veins are large and form plexuses. Its nerve supply is obtained from the hypogastric plexus of the sympathetic. The prostate gland is an accessory sexual organ whose function is to secrete a milky fluid, which acts as a diluent. In order that intelligent treatment may be instituted, it becomes imperative to distinctly understand that hypertrophy of the prostate is in no sense a pathological condition, although diseased conditions arise in other organs as a sequence to its existence. This is simply an overgrowth of its tissue, either stromal or glandular, or both together, affecting it either in part or entirely. It is important, too, that this condition be not confused with enlargement resulting from inflammation, such as gonorrhœal or cancerous prostatitis. It is a condition of the second half of life, and

rarely, if ever, causes inconvenience until the fiftieth year, although Bellfield* and others quote several exceptions. Thompson,† in twenty-three specimens, found that the median and lateral lobes were enlarged in 60 per cent.; in 15 per cent. the median lobe was hypertrophied more than the lateral lobe; general enlargement with predominance of the right lobe in 6 per cent.; general enlargement with predominance in the left lobe 9 per cent. In 4 per cent. only the lateral lobes were enlarged; in 2 per cent. only the anterior commissure was increased in size; enlargement in all proportions, save the median lobe, 2 per cent. From this table it will be seen that the gland may enlarge in any direction. Benign tumors, usually encapsulated, occasionally have been observed in hypertrophy of the prostate. As a result, certain pathological changes occur in connection with the urethra and bladder, principally in the vicinity of the vesical neck. The changes in the urethra depend upon the direction and degree of enlargement. In lateral enlargement, where the median lobe is not hypertrophied, the transverse diameter of the prostatic urethra is diminished, sometimes by several millimetres, below the calibre of the membranous portion. In unilateral enlargement the prostatic urethra is deflected to the opposite side. In median enlargement the growth may project, so as to form grooves on either side, thus making a double, narrow, tortuous passage to the bladder. The prostatic urethra is always lengthened. This may be estimated by ascertaining the distance a catheter is compelled to go before drawing urine, and subtracting the result from the normal urethral canal.

The function of the sphincter vesicæ is impaired by reason of its intimate association with the prostate. The level of the vesico-urethral orifice is always raised, since the prostate grows upward and backward in the direction of the least resistance. Pouches containing urine form in the bladder behind the gland, thus rendering complete evacuation of the bladder either very difficult or impossible. Congestion and eventually dilatation

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* "A System of Dermatology, Syphilology and Genito-Urinary Diseases," vol. i.

† "Diseases of Urinary Organs."

of the bladder result from the increased demands to urinate, and in advanced cases atony may result.

It may be safely asserted that the cause of prostatic enlargement is far from being placed on a satisfactory basis. Guyon regards it as a local evidence of disseminated sclerosis. Harrison claims that with age the bladder sinks into the pelvis, and that its posterior wall becomes depressed, and thus a pouch is formed behind the prostate. The majority of the profession have accepted Velpeau's views that prostatic overgrowth is analogous to the fibro-myomata of the uterus. Symptoms are rarely excited before the fiftieth year. Thompson ("Diseases of the Urinary Organs") claims that they are more pronounced at sixty years of age. They commence insidiously. An elderly man who is compelled to rise once during each night to void urine should be examined for commencing hypertrophy. The stream of urine starts slowly, and fails to describe that well-rounded curve associated with unobstructed urination. There may be sudden stoppages and some little dribbling afterwards. As the growth enlarges the symptoms become more pronounced. The calls to urinate may be hourly by day as well as by night. In several cases patients have informed me that before catheterization they attempted to empty the bladder seemingly every few minutes. The calls to frequent urination are doubtless due to an over-distended bladder, increasing the tension of its walls, the normal stimulus to urinate, and partly to the inflammation existing in the bladder and the mucous membrane about the vesical orifice. In many advanced cases the stream is started with such difficulty that the patient bends his body so far forward that the head reaches almost to a level with the thorax. Very often there is pain felt before micturition, diminishing after the patient attempts to evacuate the bladder. This may radiate to the perinæum and thighs, or be felt at the fossa navicularis. There is always some residual urine, the quantity depending entirely upon the direction assumed by the overgrowth. It is from one-half an ounce to two or three pints. There is very little residual urine where the lateral lobes are alone involved, although if they project forward into the bladder, thus forming post-prostatic pouches, the amount will cor-

respond to the extent of their encroachment. Residual urine is most pronounced, occurring earlier and in larger quantities where the middle lobe is involved, because of the elevation of the vesico-urethral orifice. This projection interferes with the exit of urine, consequently the capacity of the bladder is diminished and its walls become thin and dilated. Complete retention may result from acute swelling of the prostate, the organ entirely occluding the neck of the bladder, or urine may overflow by reason of excessive bladder distention, the pressure upon the sphincter causing that muscle to relax. Sooner or later the urine undergoes certain changes. In the earlier stages it is of a clear color, increasing in quantity and diminishing in specific gravity. Later it undergoes ammoniacal decomposition. The bladder becomes congested by reason of its extra work; the urine becomes septic from the presence of micro-organisms, which effect an entrance either through the introduction of dirty catheters employed for the relief of urinary retention, or from an infected kidney, or from the rectum by way of the lymphatics.

It is hardly necessary to review here the organisms that are found in the urine of infected cases. They have been discussed in one of my former articles.* Pus is plentiful, and occasionally blood may be present. In advanced cases the kidneys become infected, and casts are by no means infrequent. Naturally uræmia is established in varying degrees, producing drowsiness, headache and gastro-intestinal derangement. The epididymis and testicles become painful and swollen when frequent catheterism is practiced. Hæmorrhoids and even rectal prolapse are occasional symptoms, caused by pressure and constant straining at stool. It is necessary to institute rectal and urethral examination in order to differentiate from an obstruction caused by tight urethral stricture or vesical calculus, or from involvement of the bladder, caused by atony and paralysis. Rectal examination is performed by having the patient to lie upon his back with his knees well drawn up; the index finger of either hand is then well lubricated and introduced

* "Causes and Treatment of Cystitis," by L. T. Ashcraft, A.M., M.D.

into the anal orifice, and gently pushed up the rectum as far as it can be made to go. The disengaged hand should then be placed over the pubes, to be used in exerting counter-pressure if necessary. Such means will give an intelligent idea of the condition of the prostatic overgrowth. The urethral examination is accomplished first by having the patient urinate, preferably in your presence, since you can then judge of the character of the stream. Then select either a soft rubber or a Mercier or a metal prostatic catheter. Before introducing any instrument into the urethra, the prepuce and glans penis should be washed with soap and warm water, and the anterior urethra irrigated with an antiseptic solution. Catheters should be sterilized by observing the following precautions:

Scrub all catheters with warm water and soap. Cleanse afterwards by allowing warm water to flow through them; then place in a sterilizer.

The sterilizer which I employ is of very simple construction. It consists of a one-quart graniteware kettle with a cover. Inside this kettle is a metal tray, the bottom of which rests about two inches above that of the kettle. The tray is constructed as follows: It consists of a heavy cast-iron base; a rim of thin sheet metal, pierced by holes to allow the free circulation of steam and water; a cover; a wire-handle to remove the tray from the kettle. The centre of the base is pierced by five small holes, in which are inserted five nozzles, over which the open ends of the catheters are applied. The catheters are then coiled around the bottom of the tray. About a pint of water is then placed in the kettle, and the covered tray is introduced. Then the cover is placed over the kettle. As the water boils, steam and hot water are forced through the catheters, thus effectually sterilizing them.

After sterilization, the catheters are placed in a sterilized air-tight jar. The one I use is sixteen inches high by three and a quarter inches in diameter. In the bottom of this jar I place two ounces of a 2 per cent. solution of formalin. The catheters are now ready for use. No catheter, after being removed, should be returned to the jar unless subjected to this process of sterilization. A catheter that is very flexible or slightly

cracked, or that has been in daily use for over two weeks, should be thrown away. All sounds and metal catheters should be washed in warm water and soap. They should be placed in an ordinary sterilizing tray and boiled for three minutes, or they may be flamed off in alcohol. After this they are ready for use.

These measures may appear to consume more time than is necessary, yet when one recognizes that micro-organisms are responsible for cystitis, and that they so often gain an entrance into the bladder by means of septic catheters, anything that prevents their growth should be regarded with distinct favor. Concerning the use of a lubricant, a preparation called lubrichondrin answers all purposes. It is a jelly-like substance, put up in collapsible tubes, and will remain aseptic in very high temperatures for a considerable time. If there is much obstruction, a soft-rubber catheter will rarely pass. If moderate, a metal prostatic catheter will answer. I prefer to use a Mercier catheter, and thus minimize the danger of puncturing the prostate; also for the reason that by immersing this catheter in very warm water, it may be made to conform to any curve. The patient should always be in the recumbent position while passing this instrument, which should be done quickly and gently. If any obstruction is encountered, it should be slightly withdrawn, and another attempt made. The degree of enlargement and obstruction can then be estimated. Sometimes the catheter may be deflected to either side, or it may be necessary to depress the handle before it enters the bladder. Decrease in the bladder capacity may be estimated by measuring the amount of residual urine. The contractile force of the bladder may be judged by noticing the force of the stream. Here a word of caution is necessary. Never withdraw all of the urine at one sitting, or any portion of it very quickly; shock may result or uræmia may at once arise. Should the catheter meet with an obstruction anterior to or at the bulbo-membranous junction, urethral stricture either exists alone or complicates this condition. Atony of the bladder from disease of the central nervous system is associated with a slow, feeble stream, and there is no obstruction to be overridden. Vesical calculus

presents many of the symptoms of hypertrophy of the prostate, but if a metal catheter is used the characteristic click of the stone ends all doubt.

The treatment of prostatic hypertrophy is palliative, mechanical and operative. In the majority of cases that are brought to the surgeon it is usually too late for palliative measures, although if taken early, particularly in conjunction with mechanical treatment, the necessity for operation may be averted. Hygiene and diet are indispensable, since neglect of either may cause congestion, and result in acute retention, with its unpleasant consequences. The patient should observe these rules—plenty of sleep, indulge in moderate exercise (preferably walking, as the jarring coincident to riding horseback or a wheel produces some degree of irritation and congestion). He may partake of moderate sexual intercourse. It is important to avoid taking cold; he should observe the hygiene of the skin by taking tepid baths, preferably before retiring. Woollen undergarments should be worn during all seasons. Encourage gentle daily movements of the bowels by drinking before the morning meal a glassful of Hunyadi-Janos or Apenta. The diet and drink should be nourishing only. Alcoholics or tipplers should drink whiskey well diluted, and should avoid any foods that will tend to promote acute dyspepsia, or increase the specific gravity of the urine. Medicines undoubtedly serve to counteract some of the complications which arise from prostatic hypertrophy, and Professor Mohr informs me that he has found that iodine, cyclamen and conium decrease the size of the overgrowths. A number of measures have been employed in the mechanical treatment of this condition. I rely upon dilatation and catheterization. Dilatation is indicated in those cases where there is very little enlargement, and about from one-half to one ounce of residual urine, the patient being compelled, perhaps, to rise once in the early morning hours. Dilatation is beneficial, since it relieves congestion and prevents rapid enlargement. I use Guyon's posterior dilator, since it is patterned after the normal urethral curve, and admits of twenty-seven millimetres dilatation. It should be used every third day, and immediately after its removal the bladder should be irrigated, thus doing away with

the possibility of bladder infection. Sooner or later the "prostatic" is compelled to resort to the use of the catheter in order to quell the demands of frequent urination, and to avert the evil consequences of long-retained urine. The use of a catheter, however, is fraught with much danger. I am confident that while its intelligent employment by either surgeon or patient will do much toward making life endurable for this class of sufferers, yet great care should be exercised, since it is by no means infrequent to see false passages, orchitis, epididymitis, urinary fever, cystitis, pyelitis and uræmia result from its careless use. Care, then, must be taken to follow the rules previously suggested.

When shall we use the catheter? Formerly it was thought best that this should be deferred as long as possible, but with antiseptic precautions we may feel safe in using it when examination reveals two ounces of residual urine and three successive nightly urinations. It is better to employ a soft or Mercier catheter, using it before retiring, thus obviating the necessity for interrupted rest. Should there be six ounces of residual urine, the catheter may be used morning and evening, and for every additional two ounces it should be used once more during the day, afterwards always washing out the bladder with any of the recognized antiseptics. The use of the catheter also possesses other advantages which are mentioned by Valentine,* who observed post-mortem that its long-continued use had worn a ridge in the median groove, thus lowering the urethro-vesical orifice. Eventually great discomfort follows catheter-life, calls to urination are more frequent, and the patient cries out for permanent relief or death! It is a grave error to allow a case to progress towards this course. Formerly surgeons were loath to suggest operative measures, because, until the Bottinni operation had been revived, one had either to castrate patients, in order to obtain even indifferent results, or submit them to operative measures, of which the lowest mortality was 6 per cent. Of course, acute retention of urine demands immediate suprapubic or perineal cystotomy in the event of unsuccessful cath-

* "Journal of Cutaneous and Genito-Urinary Diseases," p. 425, Sept., 1899.

eterization. From the review of the pathology and symptoms of prostatic overgrowth, it will be seen that operations are instituted with a view to allowing the bladder to empty itself by removing the obstruction, thereby restoring vesical tone; and while in a very considerable number of cases satisfactory results follow operation, nevertheless every one has seen failures, and although the patient does not succumb, yet the bladder fails to regain its lost tone. These cases have been regarded by Thompson and Guyon as local evidences of general arterio-sclerosis.

The following measures have been instituted to remove prostatic overgrowth: Castration and vasectomy, prostatotomy and prostatectomy and thermo-electric prostatotomy. Other methods, such as ligation of the internal iliac arteries, have been practiced by Meyer, but they have fallen into disuse.

It is far from the writer's intention to weary this Society by a long recital of the technique of each operation, but simply to enumerate briefly the salient points of each—the indications for their employment, the mortality connected with them, and the results achieved.

Recognizing the analogy between uterine and prostatic growths, castration was first advocated by Ramm for the relief of this condition. Atrophy of the prostate resulted in 54 per cent. by abolishing the stimulus that excites the function of the gland and thus lessening its congestion. Bladder contractility returned and cystitis disappeared in 66 per cent. of cases operated. The published statistics vary from 7 per cent. (White) to 18 per cent. (Cabot). Castration has fallen into bad form at the Hahnemann Hospital, because acute mania occasionally followed, and because it has failed to give good results, namely, diminishing the size of the gland and having very little influence in decreasing the amount of residual urine. Besides, just as good, if not better, results can be obtained from vasectomy or ligation of the vasa deferentia. Incidentally, unilateral orchidectomy is not attended with good results.

Vasectomy is now practiced as a substitute for castration; it is an exceedingly simple operation. The vas may be dealt with by simple ligation, single or double, resection of the cord or any of its structures; it is very liable to be followed, when the

latter operation is performed, by sloughing of the scrotum. Vasectomy is, according to Van Lennep, associated with no mortality. In two cases which I operated I was compelled to catheterize systematically for five days because of acute retention. Later, however, marked improvement resulted. Other cases subjected to vasectomy showed slow but noticeable improvement. The testes and prostate became diminished in size. Vesical contractility improved, cystitis slowly disappeared, and the residual urine diminished in quantity. Prostatotomy by the perineal route is unsatisfactory, since very often the rigid, elongated prostatic urethra prevents thorough intravesical inspection, and in some it is difficult to remove the overgrowth. It may be practiced where drainage is required, afterwards inserting a large drainage-tube, allowing it to remain for a week. The mortality is 5 per cent., and in selected cases good results have been obtained. Prostatectomy may be performed through the perinæum or by the supra-pubic route, or, in some cases, by combined perineal and supra-pubic section. Perineal prostatectomy differs from perineal prostatotomy in this point: after the incision is made, as much of the growth as can be grasped is removed by forceps or an ecraseur. It should be practiced where there is a small median growth or valve-like projection. Supra-pubic prostatectomy is a very satisfactory way of removing by incision or enucleation. First perform supra-pubic cystotomy, thus allowing bladder inspection and manipulation, and afterwards perform perineal urethrotomy. An assistant introduces his finger into the bladder and pushes the prostate into the perineal wound, when it is either shelled or cut out. Hæmorrhage is controlled in the ordinary manner, and the bladder is drained above and below the pubes. Satisfactory results have followed; the mortality is 17 per cent.

Prostatotomy by electricity was first devised by Bottinni, of Pavia, in 1872. Unfortunately the published results are not sufficiently explicit, although, as a rule, they are said to be good. About a year ago Freudenberg, of Berlin, revived the operation, and since then some of the acknowledged genito-urinary surgeons of the day have practiced it with brilliant results. A

brief description of Bottinni's instrument and a short *résumé* of the principal points connected with the operation may be interesting. Should anyone desire to read the technique, it is only necessary to refer to an article by Guiteras.* The necessary instruments are a galvano-cautery battery; a Bottinni incisor; an irrigating jar; two pieces of tubing, one leading from the bag to the instrument, the other from the instrument to the basin on the floor; a saturated solution of boracic acid; a hand-syringe of about eight-ounce capacity; two Mercier and two soft-rubber and elbow catheters and a scalpel. The operation should be conducted under general anæsthesia. He should be placed on his back upon a table and a pillow should be placed under his hips. The customary antisepsis having been observed, the bladder should be emptied and irrigated with the boracic acid solution, allowing six ounces of this to remain. The irrigator should hang to the right of the patient, its outlet-tube connected with the incisor, the battery placed on a chair at the foot of the table, and the instrument then passed into the bladder. If the meatus be too narrow, it should be enlarged to the proper size. Connect the battery and the incisor by means of the cable. Then rotate the beak of the incisor and pull it forward until it hooks behind the prostate. Insert the left forefinger in the rectum and feel the beak of the instrument. Then remove the finger and grasp the handle of the incisor with the left hand. See that the water is running through the cooling apparatus and that the contact-screw is properly tightened. Then turn on the current to forty or fifty amperes. In the cases which I have operated the care of the battery has been given to a competent electrician. The wheel of the incisor is turned until the knife has traversed the entire distance. In this connection it is necessary to dwell upon several points. First, how many incisions shall one make, and how long shall each be? The number will, of course, depend upon the location and character of the growth. In median obstruction, one posterior incision from three to four centimetres long is made, and one an-

* "The Technique of the Bottinni Operation," *N. Y. Med. Jour.*, Apl. 29, 1899.

terior incision from two to five centimetres long, searing in one direction only. The wheel is then reversed and the knife returned to its place. Where lateral hypertrophy exists, right and left incisions are made from one and five-tenths to two and five-tenths centimetres in length. After making these incisions, disconnect the current, remove the instrument, and place the patient in bed. Should retention of urine occur, tie a catheter in the bladder and allow it to remain there for two days, or practice catheterization. Hæmorrhage may be controlled by intra-vesical irrigation with hot water. If this is ineffectual, perform either perineal or supra-pubic cystotomy, and control hæmorrhage by packing and inserting large drainage-tubes. Elevated temperature, frequent desire to urinate, and constipation, if present, may be controlled in the usual manner.

The indications for the performance of this operation are as follows: A *résumé* of the other popular methods of dealing with this disease shows a mortality of from 5 to 20 per cent., excepting vasectomy, alone sufficient to warrant a departure therefrom, particularly since such brilliant results have been obtained by Guiteras,* Meyer, Freudenberg and others. Guiteras reports twelve cases without a death, in which not only the morale was improved, but also there was very little residual urine and a gradual disappearance of cystitis. Where castration and vasectomy are declined, and where patients object to undergoing a major operation, Bottinni's operation is indicated; it is best suited to hard prostates presenting median enlargement and where the residual urine is about four ounces. The only contra-indication for its performance is a crippled condition of the kidneys. It has been observed that better results follow early operation. Some surgeons object to Bottinni's operation, because it is a *dark one*, but this is hardly a weighty consideration to those skilled in urethral and bladder manipulation. The question may be asked, "How does it benefit?" It may be answered by saying that furrows are burned through the obstruction, the eschars being removed during urination. Subsequently these gaping furrows contract, and a lower

* *Med. Rec.*, July 29, 1899.

urethral level is obtained. Searing also cuts off the blood supply to the prostate.

For a consensus of surgical opinion it is only necessary to read a recent discussion participated in by the members of the New York Academy of Medicine, Section of Genito-Urinary Diseases,* in which the operation received unanimous endorsement.

CATHETERIZATION.

JOHN W. COOLIDGE, SCRANTON.

More than a quarter of a century ago that brilliant surgeon, Dr. Gross, of Philadelphia, wrote in his book of "General Surgery" that if asked to name the most delicate operation in the domain of surgery, he should state it was the "passing of a catheter on the male subject." Then antisepsis was not in vogue, and the many serious sequelæ which doubtless had strongly impressed that deeply discerning author as due to defective technique, lack of skill, and natural difficulties in the way of catheterism, were the effects largely of lack of surgical cleanliness or of modern asepsis. To-day, a catheter in the hands of the average physician should be productive of very little of the ills described by the older writers if a few cardinal points in its use are not overlooked.

The condition in which catheterism in the male is most frequently demanded is retention of urine from stricture of the urethral canal, prostatic affections with atony of the bladder, paralysis of the detrusor muscles, spasm of the sphincter, congestions, inflammation or traumatism of the visceral neck, and obstruction of the mouth of the urethra by a blood-clot, calculus or growth. The catheter meets, then, mainly the condition of bladder-emptying and bladder-washing, usually at the hand of the physician, but at times necessarily by the nurse or attendant, or by the patient himself. I look upon the proper

* See *Jl. Cut. and Genito-Urin. Dis.*, September, 1899.

cleansing and preparation of the instrument as the most important step of the operation, together with careful asepsis of the operator and of the genitalia of the patient. The penis should be mopped off with gauze or cotton dipped in bichloride one to one thousand, and the urethra douched with a saturated solution of boracic acid before the catheter is introduced, and as it is being withdrawn. For this purpose, and for washing the bladder through the catheter, I have seen nothing so cleanly and *apropos* as Carleton's modification of the Janet silver syringe. This syringe has a glass barrel, is separable, and admits of complete sterilization by boiling. The sizes range from two to eight ounces.

For patients who are compelled to use catheters constantly the following advice may be of value: They should keep on hand twice as many catheters as are needed for a single day—a fresh instrument to be used for each catheterization. A metal box, arranged for sterilization by paraform; a bottle of tablets of bichloride of mercury, one tablet to a pint of hot water, making a solution of one to one thousand; a roll of bichloride gauze; a package of absorbent cotton; a tube of lubrichondrin or sterilized vaseline; two ounces of green soap; a quarter of a pound of boric acid, a teaspoonful to a pint, making a proper solution; and a dozen towels, which must always be boiled, sun-dried or baked before using. To sterilize the catheters, wash them in green soap and hot water, rinse thoroughly in plain hot water, wrap them separately in pieces of bichloride gauze and put together in a towel, and place in the paraform box for twenty-four hours, after which they may be removed from the sterilizer and used as required. When catheterization is necessary, wash the hands in green soap and hot water and render them aseptic in bichloride solution one to one thousand, dip a pledget of cotton in bichloride, and thoroughly cleanse the end of the penis. Lay a clean towel about the organ, remove a catheter from the towel, dip it for a moment in the hot boracic-acid solution, lubricate with lubrichondrin, and introduce. After using, wash and syringe out the catheter with green soap and hot water and wrap in a clean towel, where it can be kept until final preparations for steriliza-

tion are made, as above directed. This is mainly the advice given by Carleton; but patients will not follow it out to where ideal results are to be had, or anywhere near it, and I very much doubt if the average physician will; but it will pay to do so in every instance. Three principal kinds of instruments are in common use—metal, gum, and flexible or soft catheters; and in addition we have special forms, such as prostatic, the single and double elbow of Mercier, and the olivary or rat-tailed. Metallic catheters should be discarded as a rule, although occasionally they are indispensable. But there is danger in unskilled hands of doing much damage at any point along the urethral canal, and particularly where resistance is met, by the use of either metallic or gum-elastic catheters. The expert will need and will use the metallic at times, but infrequently, and he will know its indications, so to speak. As this paper deals only with the subject of catheterization in the male, the use of the glass catheter need not be considered. In general, then, flexible instruments should be selected for use.

Nicol states that red, black and yellow gum-elastic will not stand heating by any process to a temperature sufficient for complete sterilization. Soaking for fifteen minutes in carbolic acid one to twenty, or for half an hour in one to forty carbolic acid, or for an hour in bichloride one to one thousand, renders the surface of nearly all of them unfit for use. They become dull and sticky, and if wrapped in towels are covered with fluff in the drying, and after a few soakings are wholly unfit for use. If this class of instruments are used, they are best prepared by simply washing in green soap and water, rinsing in running water and dipped in the hot boric-acid solution, if not better prepared by formalin sterilization. But the former method does not destroy the catheter, neither does it render it safe to use, and it would be better to entirely discard this class of instruments after they have been once used, if used at all, particularly if the urine is at all septic. If the urine is not offensive, they might be washed and rinsed as described, and used again, although to my mind it is far safer to throw them away, unless one has the facilities and will employ formalin sterilization. Boiling destroys all gum-elastic and varnished catheters in

short order, and they will not long stand the action of antiseptics, such as carbolic and bichloride. For all this class, including the linen and silk fibre, formalin impresses me as the ideal agent for complete sterilization and for all hollow instruments. It does not destroy if the vapor is used, and is absolutely destructive of germs. The paraform tablets can be put in a glass jar, with rubber or metal cover, or a 40 per cent. formaldehyde solution thrown over a little lime in the bottom of a similar receptacle in which the catheters are kept. They should remain in the vapor at least twelve hours, and in all cases the catheter should be douched within and without by a saturated boric-acid solution before it is used, as the formalin is irritating to the mucous membrane. Formalin gas may be generated by the Schering evaporator as well. The most commonly used catheter should be a red-rubber Jacques, with a solid tip. This instrument is not destroyed by boiling, and can be completely sterilized any number of times by this method. If a soft-rubber catheter is used, which has not a solid tip, but a space between the eye and the point, there is a great danger-point there for sepsis. Such a catheter should be held under a tap, or should be flushed by the use of a syringe, and all *débris* carefully removed. The technique of passing the catheter will vary somewhat with the condition of the urethra and the kind of instrument employed. Using the classical illustration, with a normal urethra and a stiff catheter to be inserted, the operator should stand at the left side of the patient, who is lying in a recumbent posture. The instrument, of the size of a No. 16 to 24 French, which has previously been made aseptic, and is well lubricated with lubrichondrine or sterilized vaseline—the former is the ideal lubricant; it is sterile, soluble in water and non-irritating—is held between the thumb and forefinger of the right hand, with the little finger of the same resting upon the abdomen of the patient, just at or beneath the umbilicus. The catheter is passed into the meatus and the penis, with the left hand slipped over the instrument as far as it will go. This procedure straightens out the folds of the mucous membrane and gives a free, smooth opening. The catheter is now raised from the horizontal to the vertical position, when, by pressing slightly

downward, and at the same time depressing the shaft between the thighs of the patient, it will usually glide into the bladder. When not passing readily into the bladder as described, it may catch: 1st. In the fossa navicularis, an accident which may be avoided by keeping the tip close to the floor of the urethra. 2d. It may stop at the triangular ligament; when this happens, the instrument must be withdrawn a little, and the tip made to hug the roof of the urethra. 3d. Strictures may hinder its passage, in which case dilation by sounds may be employed; or, better still, an olive-pointed gum catheter or the new Simonson filiform and combination silver catheter will be found all sufficient. 4th. The neck of the bladder may offer some resistance, in which case withdrawing the stylet somewhat and allowing the end to tip up, it will usually ride over the urethra floor and into the bladder. A soft-rubber catheter, with a Mercier or elbow neck, answers admirably here. The stylet can be inserted to within an inch or so of the tip, which can be moved freely in any and all directions. Many of the impediments to successful catheterization can be overcome if the instrument is connected with a douche bag containing a solution of boracic acid, which is allowed to flow through the catheter during catheterization. As a rule, a large catheter is much preferable to a small one.

In cases where retention is due to congestion, muscular incoördination or traumatism, growth or blood clot, a No. 16 to 24 soft-rubber Jacques catheter will be found most satisfactory; when due to impacted calculus a solid silver instrument may be required, as it occasionally will be—particularly the instrument having a long, sweeping curve—in a tortuous distorted urethra accompanying prostatic enlargement. Both before and during the withdrawal of the catheter, the distal end of the same should be closed by pressure, thus preventing, possibly, urine from coming in contact with any abrasion present in the urethra. The possession of well-selected and well-assorted instruments is important. The greatest difficulty will be experienced in those cases where the obstruction is at or near the neck of the bladder, where false passages exist, due to previous misdirected efforts at catheterization, or where there are large hypertrophies

of the prostate or spasm of the visceral neck. By locating the false passage, and using an elbow catheter of the Mercier style, one can sneak around the places, likewise around the valve-like closure of the internal meatus, by prostatic enlargement or neoplasm. By nicking the catheter at its distal extremity, one has a guide as to the elbow end; this will enable one to keep the tip up against the roof of the urethra and override an obstruction or dam at the visceral neck, or glide around any point of resistance. Sometimes an English catheter, if placed for a few moments in hot water and moulded to an exaggerated curve, then cooled in ice water, if introduced rapidly with stylet removed, will retain its form and enter the bladder. After using every precaution in addition to these suggested, it is likely that occasional untoward effects will follow catheterization; locally there may be pain in very sensitive patients, but even that may be mitigated by gentleness and thorough adaptation and preparation of the instrument used. Hæmorrhage may follow, although not usually serious, and which will cease generally after the withdrawal of the instrument. However, when great care is observed, and there is considerable or great hæmorrhage, a pathological condition of the urethra is probably present. In such a condition a false passage is easily produced in a mucous membrane where long-standing congestion has impaired the integrity of the tissue. This occurrence may be recognized by the sudden giving way of usual resistance, sudden pain, and sensation of grating, appreciable to patient and operator. The handle of the catheter will deviate from the median line, and, while the operator may have the impression that the bladder is entered, no urine will appear.

Extravasation, urinary infiltration, inflammatory conditions or abscess may follow this accident, while urethritis and cystitis follow in the wake if sepsis is added. Constitutional symptoms, due chiefly, I believe, to sepsis (but also due in certain cases to disturbance of the central nervous system), urethral fever of septic origin by absorption of ptomains or alkaloids, and pyæmia with metastatic abscesses, have been observed. Involuntary retention of urine will need the catheter in most instances, although, if it is the result of spinal disease, and there

is loss of knee-jerk, as in tabes dorsalis, general paralysis, polyneuritis, or injury of the spinal cord, the urine may be expelled by pressure over the supra-pubic region without the use of the catheter. The hypogastric region should always be examined in patients over 50 years of age, to ascertain whether there is any enlargement indicating an atonic or distended bladder. Urine should be passed in your presence, and the effect of forced expulsion noticed. If hypertrophy of the prostate is present, the flow will be diminished and the urine will dribble after the act, and it is quite likely there will be residual urine; then the catheter should be passed to determine that fact. The amount of residual urine should always be approximately estimated, and whenever it is two ounces, systematic catheterization is indicated. As a rule, patients having two to four ounces of residual urine should be catheterized once daily, and once for each additional two ounces. In withdrawing the urine from an over-distended or a diseased bladder, care must be given to the amount removed. If the quantity is large, and it is entirely removed at the first or even the second catheterization, it may cause syncope, which may be followed by urethral fever, or even death. The bladder, after each catheterization, if cystitis exist, should be most carefully washed out, and a little of the selected solution left in. With about a No. 12 French sterile catheter *in situ* after the urine is withdrawn, four to six ounces of the selected fluid is best injected by means of the Janet modified silver syringe, and allowed to return through the catheter as soon as the patient notices a full feeling in the bladder; or, it may be well to remove the catheter and allow the fluid to be expelled per urethram.

USES OF INTRAVENOUS INJECTIONS OF SALINE FLUIDS.

J. W. HASSLER, M.D., PHILADELPHIA.

It is the desire of this paper to bring to the attention of this Society the uses of intravenous injections of saline fluids. No subject has received more attention in the past year than injections of artificial serums. Intravenous injections are no more limited to cases of profuse hæmorrhages and shock. There are reports from this country and the European continent relating the experiences for the relief of toxemias arising from renal diseases, diabetes, or any acute infection.

To the surgeons, saline infusions are of common use in shock and collapse. To this list is now added the acute infections.

First, the results obtained in cases of hæmorrhage. If the source of hæmorrhage is where the recourse to hæmostasis by forceps or ligature is an impossibility, as in hæmoptysis, metrorrhagia, or intestinal hæmorrhages, intravenous injection of saline solution acts as the hæmostat. It has been said the use of the salt solution causes an elevation of the blood-pressure, while the decreased blood acts as a hæmostat. This has been proved untenable, as the serum renders the blood more coagulable. Dr. Hayem states this fact—that, for increasing the plasticity of the blood, injections of salt solution act more energetically than transfusion of blood.

In looking over the list of cases as recorded by me, so many present themselves as worthy of report that only two cases have been taken.

Case I.—Man; disease, typhoid; complication, intestinal hæmorrhages. At intervals for three days he had passed, as the nurse expressed it, a bucketful. I was called at the ending of the third day. The symptoms that presented themselves were pale face, temperature 98.4° per rectum, cold body, pulse quivering and almost imperceptible. Strychnia one-twentieth

of a grain, hypodermatically administered, followed by infusion of three quarts of salt solution. During the injection the pulse gradually reappeared, face partially regained its color, perspiration broke out on the body. In an hour following the injection temperature 99.6°, steadily increasing to 101° that evening, pulse full and tension increased, with a slight cerebral excitement. The following morning I was recalled as the hæmorrhages reoccurred, though not as severe. Pulse weak, temperature not recorded, patient restless. Infused two quarts. The same reaction as previously stated. Beef tea was given by the mouth. Patient wrapped in flannels, foot of the bed elevated. As reported to me, no reappearance of the hæmorrhages, with the recovery in three weeks and two days.

Case II.—Man; disease, internal injuries. In extreme collapse. Infused to allow of operation. Upon opening the abdomen a large quantity of free blood was evacuated; upon further examination spleen was found to have been lacerated, with only a slight oozing from torn surfaces. Was this partial hæmostasis due to the infusion? Result: case died six hours following.

In cases resulting from shock we have a striking similarity to collapse. In the former a loss of arterial tension due to vasomotor paralysis, produced reflexly by peripheral nerve irritation, causing a loss of blood from the head and extremities, the blood going to the larger vessels in the abdomen and there acting feebly. In collapse the blood goes from the body. Therefore, in shock our purpose is to increase arterial tension. If this cannot be accomplished by rest, artificial heat and stimulation, infusion is but the one recourse. Among the number of cases, two will be reported.

Case I.—Female; disease, sarcoma at knee; operation, resection at hip-joint. Temperature prior to operation 98.8°, pulse 136, due to nervousness. During the operation pulse gradually growing weaker and rapid, running at 142, 154 and 164. At the close of the operation temperature 96.8°, pulse too rapid to be counted, and exceedingly shallow. Infused four quarts of saline solution. During the administration pulse decreased in rapidity, increased in tension, face partially regained its color;

a slight chill lasting ten minutes. At the end of the first hour temperature 99.6°, pulse 136. The second hour, temperature 102°. Aconite, twenty drops in half a glass of water, one teaspoonful every half hour for six doses, was administered. At the end of two hours the temperature had fallen to 101°, pulse 132 full. Stimulated with milk punches and broths. Patient made a good recovery.

Case II.—Boy, age nine; operation, double thigh amputation. Severely shocked. During the operation was infused. Boy made a good recovery. This being an accident case, the temperature and pulse were not recorded prior to the operation. In renal diseases and acute toxæmias, artificial serum has given a new lease on life.

The reports from German, French and American authorities are certainly flattering:

Case I.—Man; disease, parenchymatous nephritis, with the following symptoms: partial comatose state; had passed a half pint of urine in forty hours. The hot pack, purging, pilocarpin, with the homœopathic remedy, had failed. Infused two quarts of saline fluid. This was followed by a profuse perspiration, slight chill, and in four hours he had passed fourteen ounces of urine. His comatose condition was entirely relieved; for two days he remained perfectly comfortable, passing a sufficient amount of urine. Eight days following the infusion his previous symptoms returned, the injection was repeated, infusing three quarts, followed by a similar good result, lasting a month. The infusion was again repeated with good results; since then I have heard nothing from the case. Taking the case cited, it seems as if life could be prolonged almost indefinitely, in conjunction with medical treatment.

Case II.—Woman; disease, septic peritonitis—the peritonitis superinduced, I believe, by dirty instrumentation during curettement of the uterus for abortion. Intravenous injections were given four times in as many days, thereby attenuating the blood, lessening the possibility of toxic absorption. Treatment consisted of ice-bags to the abdomen, thorough purging, and a remedy which I have forgotten. Patient recovered.

The treatment of cases by infusion necessitates that the kid-

neys functionate properly. Atrophic and sclerotic lesions of the kidneys prevent the elimination of urine, resulting in infiltration of the different organs. Perfect antiseptic technique, both of instruments and site of operation.

A case was reported to me recently as dying from septic meningitis, following an infusion; cause of meningitis attributed to dirty infusing instruments. No air must enter the vein. The French and Germans claim that a small amount of air will be harmless. This seems an error, for it has been demonstrated to me a few times how a small amount of air will produce dangerous symptoms, and even death.

Until a few months ago I had been using the simple salt solution, prepared by adding a drachm of salt to one pint of boiled water, the temperature of the water at 100° F. A number of combinations have been suggested. Dr. Reverdin claims that sodium sulphate has a hæmostatic action, and a number of those interested in infusion use solutions containing sodium chloride and sodium sulphate.

The suggestion by Dr. Locke, of Howard, and Dr. Hare, of Jefferson, seems to be the best at the present day. It is as follows:

Calcium Chloride, ...	0.25 gram.
Potassium Chloride, ...	0.1 "
Sodium Chloride, ...	9.0 "
Sterilized water to make one liter.	

It was shown by experiment that the calcium salts are essential to the clotting of blood; also that it will sustain the beats of the heart well and for a long time. But the calcium alone, it was found, caused strong beats which were too prolonged, and therefore inefficient, so a small amount of potassium chloride was added to correct the beat.

The preparation has been put up in bottles, ready for use, by Park, Davis & Co., thus enabling the practitioner to keep it on hand constantly.

In regard to an infusion apparatus, so many are on the market that it is frequently hard to decide which is the best. Those with stop-cocks or valves are liable to the retention and transmission of air-bubbles. In the writer's hands the syphon

method is much preferred—a German-silver V-shaped tube, one leg slightly longer than the other, for use in a large or small pitcher, a rubber tube one yard in length, and a straight canula. In performing infusion do not forget your antiseptic technique. A vein at the elbow is exposed, preferably the median basilic. After exposing the vein place under it, about an inch apart, two catgut ligatures; the distal ligature is then tied and an opening is made into the vein between the ligatures, and should be made transversely, three-fourths through. I have seen a number of failures to enter the vein from the parallel incision. A canula is then inserted into the opening, and is secured in position by tying the proximal ligature. Before the canula is passed the water should be running; in this way all air can be excluded. The rapidity of the flow can be altered at any time according to the height at which your retaining vessel is placed. The amount the patient should receive is determined by the quality of the pulse and general condition. The amount desired having been administered, remove the canula, ligate the vein and suture the incision.

DISCUSSION.

Dr. Theodore J. Gramm: I would like to ask Dr. Hassler —for I hardly think that I will be able to offer anything new —whether, in some of the multiple experiences he has had, he has come in contact with cases that have either suffered or died from icterus following profuse hæmorrhage? I had such a case in the beginning of this year, and it somewhat confused me at the time, until quite recently I found observations made by Thorn in similar cases.

The case to which I refer was that of a woman who suffered from an ectopic pregnancy and ruptured tube, and had profuse hæmorrhage in the abdomen; she was pulseless at the wrist, heart-beat very feeble, and she was certainly in a very bad condition. We made an intravenous injection of salt solution, quite warm. The patient by eight o'clock the following morning had recovered, in that she was conscious and apparently free from hæmorrhage. As far as the operation and wound were concerned, the patient seemed to make a prompt re-

covery, but four or five days subsequently she developed a jaundice and many of the symptoms of acute yellow atrophy of the liver. I was surprised at this, and would like to ask Dr. Hassler whether he can explain it. I should say the patient died in about a week or ten days, apparently from disease of the liver.

Dr. D. P. Maddux: I would refer to the great value of the cellular-tissue infusion and the rectal injection. I think that I have had the same experience that anyone has had in intravenous transfusion of blood—the most gratifying and prompt results. In fact, I think its promptitude exceeds anything else used by the surgeon or physician, inasmuch as the results on the pulse are almost immediate; but there sometimes arise conditions where, from lack of readiness, the physician, being summoned without knowledge of the case, has not his transfusion apparatus with him. In those cases the rectal injection of quite large amounts of salt water, or, if the situation is such that we cannot deliberately dissect the veins, the infusion directly into the connective tissue, is productive of prompt and good results. It should not be overlooked by those who are unprovided with the other apparatus.

Dr. J. H. McClelland: I would like to say one word. I want to refer rather to the routine practice which is pursued in such cases in our Pittsburg hospital. In addition to the immediate subcutaneous injection of strychnia and of the infusion of the saline solution, we take the symptoms of the case as we find them, and we usually find that camphor—drop doses every five or ten minutes for an hour—very materially assists reaction. Then we follow, if the symptoms of collapse continue, with veratrum album; that assists reaction; it makes the reaction more permanent. Then, when it comes to the stage of restlessness, which nearly always follows, it is our custom to give cuprum arsenicosum. That really does bring about better results than anything we have tried.

In addition to that, I order rectal enemata, consisting of the saline solution, to which is added predigested food in the proportion of, say, two ounces of liquid peptonoids to six of salt

water. I do not believe the stomach is in very good shape to digest food. We must have a new blood supply, and I believe that a rectal injection of that description does supply the need of blood. That has with us brought about, I think, the best and most permanent results in cases of hæmorrhage or shock.

Dr. Bushrod W. James: When the subject of medication comes in, we seem to forget the remedies that act very beneficially and promptly in these hæmorrhages. I have seen in some cases of hæmorrhages, where other remedies failed—hamamelis and other remedies—sulphuric acid in the first attenuation given quite frequently; it will arrest the hæmorrhage, and as soon as you can arrest the hæmorrhage, then have the patient filled up with fluid. Of course, emergencies arise and other methods come in pretty well, but you must not forget that the patient wants to be filled with fluid as rapidly as possible, by the stomach or the stomach and rectum both, and do not forget the remedy that will stop the hæmorrhage from going on.

Dr. E. R. Snader: I would like to add a little testimony with regard to the salt solution in the hæmorrhage of typhoid fever. During the epidemic of last year I think two cases were saved by the use of the salt solution, and it was introduced, because of the lack of instruments, by a hypodermic syringe into the subcutaneous tissue beneath the clavicle. The case was exsanguinated; we took an ordinary fountain syringe and attached a tube to a hypodermic needle, and, I think, inside of ten minutes we had a good pulse. I thought afterwards it was a wise procedure, although at the time I regretted that I did not have an antitoxin needle to let the fluid in rapidly. I imagine if I had allowed the fluid to get in rapidly I would have raised arterial tension, had a clot, and produced a repetition of the hæmorrhage.

In one case of hæmorrhage, where it was impossible to find the vessel, rectal injections of salt water were given as well as we could; although the patient was so far gone that the rectum was incompetent, we held in mechanically the fluid for a good period and succeeded in resuscitating the patient.

Dr. T. S. Dunning: Did Dr. Hassler use three and four quarts continuously, or did he allow a rest? The quantity of four quarts seems to be exceedingly large.

Dr. Hassler: As to the question of Dr. Gramm, I would say that I do not know why the result should be as it was, as regards the liver.

As to Dr. Dunning's question, I have to say that eight quarts were given at one sitting.

Dr. Dunning: Without any rest?

Dr. Hassler: Without any rest; and also in a second case, where the eschar had slipped, eight quarts were given at one sitting with good results.

POTENTIZED MEDICINES IN SEPTIC AND OTHER CONDITIONS.

MALCOLM MACFARLAN, M.D., PHILADELPHIA.

A collection of the recorded experiences of the individual members of an association best further its objects, and when read, will meet with varying degrees of reception as to credibility or value.

Reports altered or abbreviated from text-books have practically little worth; but the simple unbiased experience of the mass of working medical men form a jury of the whole, and will go far towards settling the various doubtful questions of daily practice.

The most astonishing and revolutionary results have been brought about, during the past few years, in wound treatment by antiseptic precautions, a result of the practical application of the germ theory of disease, inducing surgical cleanliness, and preventing the access of destructive disease-producing organisms. This local or antiseptic treatment has fortunately caused many former complications to almost disappear entirely, or rarely to be seen, and for which erysipelas may stand as a general type of infection.

One has, at the present day, to draw largely from personal experience and records of the past for a proper knowledge of the dreadful effects of septic conditions which, when occurring now, are looked upon as a reproach—good came out of evil—for it was then, in times gone by, even with apparent, but not surgical cleanliness present, that wounds would do badly, and the homœopath was compelled to study his case according to the law of cure, and often saw with delight the most brilliant and rapid result brought about by his remedy. In this was his experience gained and belief confirmed.

In a short article no hard and fast rule can be laid down as to what remedy is best in a given case. The general principle of the similars underlies the application of any or all remedies, and the more close the analogy the better the cure.

To-day, as far as our experience goes, or our imperfect knowledge allows us, a certain proceeding may be best; to-morrow we may see something better. Enough has been recorded, however, to guide us in the road to more or less success.

Every thinking physician, no matter from what school, must see in the triumphs made of late, by the application of the antitoxins, proof from an unexpected quarter of the truth of the law of the similars.

In the minute quantity of the substance used, as well as in the mode of its preparation, is seen something akin to the method of making potencies. It appears reasonable, then, that if protection or immunity from disease is gained by the use of the toxin, that the result is brought about by applying the law of the similars, and while conjecture and theories without number have been made to explain the cause of cure, the simple fundamental law of correspondence is ever present and sufficient.

All that concerns vaccination appears to be essentially involved in serum therapy or antitoxins and homœopathy, and if a good result is due to the application of this general law, it has a much wider scope than at first it would appear to have.

That immunity does exist is a self-evident fact, and explains why one person is affected and not another, when both are

subject to the same conditions and apparent causes. One attack of a certain contagious or infectious disease will frequently cause immunity against a second. A drug like rhus or belladonna, because it produces symptoms and appearances like a form of scarlet fever, will cause one to be more or less immune against the disease it resembles.

The practical application of bacteriology involves a homœopathic principle which is rapidly being accepted by medical men everywhere, and will do much towards breaking down the remaining prejudices against the followers of Hahnemann and greatly aid in making the practice of medicine more scientific, exact and successful.

The range of action of the local antiseptic is very limited, but usually sufficient for its special purpose. The influence and action of the internal similar remedy is far-reaching and general in its immune-producing and healing influence, affecting for good not only the individual, but, through him, the race as well, and the beneficial effect, therefore, of making provings, under proper restrictions, is apparent. Disease-producing germs will likely diminish or cease to exist in such force in the future, as the disease producing them will be checked by the immune-producing or similar remedy and hygienic measures.

Diseases in man which result in affections of the thyroid gland have in many cases been helped and cured by the similar healthy gland of the sheep; distressing symptoms and a diseased condition of the ovaries and tubes by a preparation from the similar structure of the healthy heifer. The curative action of thyroid and ovarian preparations is greatly increased by potentization, as the writer can vouch for by abundant experience, and it is believed that if the latter or some appropriate remedy could be used it would largely do away with the removal of more or less affected ovaries, and prevent mutilation and misery among such a number of women.

There may be cases where it would be better practice to give rhus, or some other appropriate remedy, to prevent local infection or erysipelas, than to use corrosive sublimate or something similar locally, the wound being protected.

In some conditions within the abdomen, where it is dangerous to use antiseptics, and you have within its cavity purulent or diseased collections, the most remarkable and speedy relief has been given by such remedies as potentized turpentine, camphor, opium, belladonna and others, presupposing, of course, that drainage is used, or essential surgical aid being given.

Operative interference in appendicitis has been frequently averted in the same manner. In combating sepsis and surgical fever, where all that is possible has been done locally, what remarkable and quick relief has come in a few hours from such medicines as aconite, arsenic, creosote, china, mercury and iodine!

The patient in general is treated, and not alone the local or external sign of the disease.

The homœopath has a very great advantage over the practitioner of the prevailing school, because, in addition to antiseptic precautions, he can treat the patient from within; he can control grave and otherwise fatal systematic conditions by internal remedies. His rival does the best he can—but only from the outside. When he attempts to administer medicines he is largely in the dark, and being without a guiding principle, often gives morphia or a narcotic simply to quiet his patient.

The statements as to the superiority of dynamized medicines, like those made of any remedy or procedure, are, after all, to the student, only assertions until put to the test, and for belief must depend on actual trial with the sick. Fortunately there exists enough testimony to warrant such tests being made by the seeker after truth.

GASTROSTOMY FOR BENIGN STRICTURE OF THE ŒSOPHAGUS.

H. L. NORTHROP, M.D., PHILADELPHIA.

ALTHOUGH this little patient says "ice cream tastes better by the mouth" than it does through her gastric fistula, she is nevertheless thankful that she has an artificial channel leading into her stomach, for she is intelligent enough to appreciate the fact that it was the means of saving her life, and that she must now depend upon it for further nourishment.

She was sent to Hahnemann Hospital by Dr. T. L. Chase on July 14, 1899, and we were told that she was 8 years of age, and had enjoyed good health until December 17, 1898, when she developed scarlet fever and was sick for sixteen weeks. Convalescence was about complete when, late in March, a lump appeared in the left side of the neck below the ear. This increased in size and "looked like a blind boil;" did not come to a head, and poulticing had no effect upon it. The physician in attendance at the time lanced it, but found no pus. Difficulty in swallowing occurred simultaneously with the supposed abscess, and when the latter disappeared total œsophageal obstruction followed.

On July 15th I attempted the passage of bougies, but found it impossible to even enter the œsophagus, the instruments stopping at the level of the cricoid cartilage; the smallest size used was 14 F.

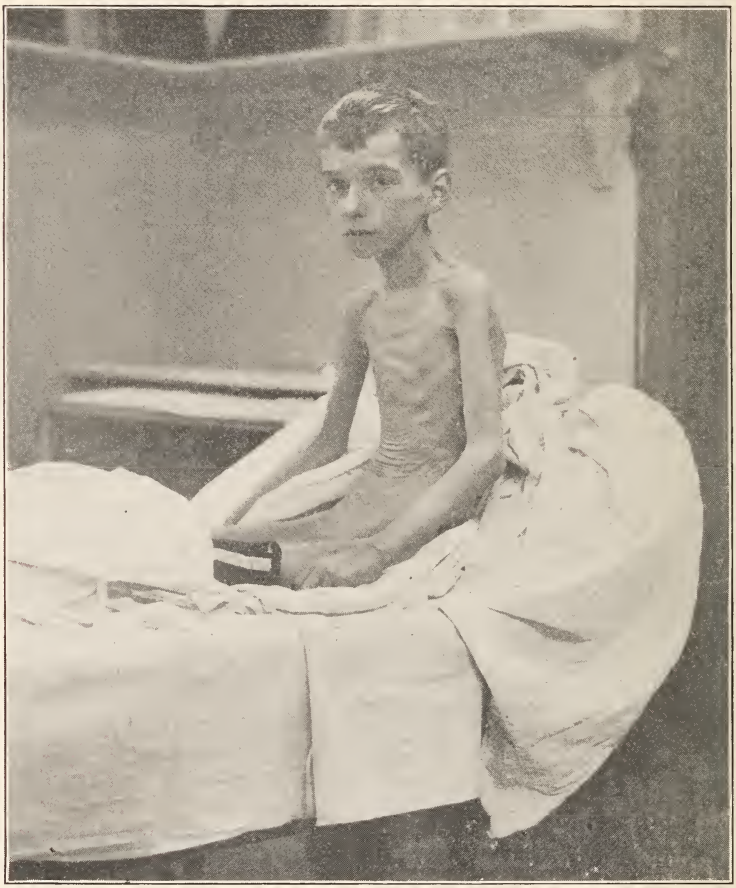
My finger introduced into the pharynx would not enter the œsophagus, which felt hard, like cicatricial tissue, and seemed to be completely occluded.

One ounce of water taken into the pharynx would be regurgitated in a few minutes, exactly the same quantity as introduced. Nutritive enemata had been used for weeks, and the sphincters now refused to retain them.

The child at this time was weak and emaciated, and sank

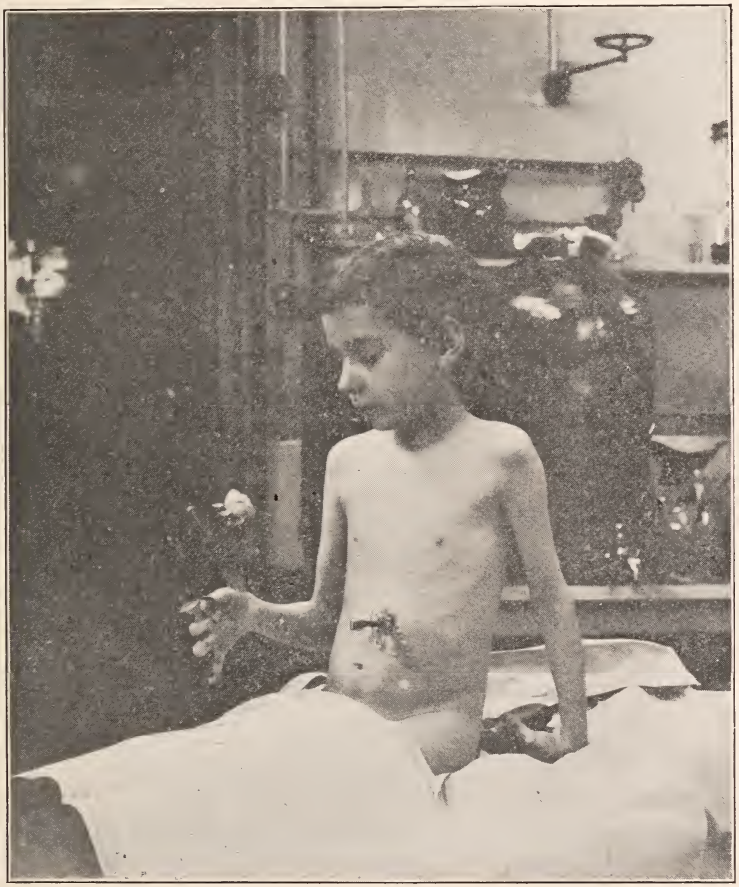
into a pronounced typhoid state. In order to avert death by starvation, which threatened her, I performed gastrostomy on July 20th, as described by Marwedel in the *Beiträge zur klinischen Chirurgie*, 1896.

After opening the peritoneal cavity by Fenger's oblique in-



cision, which runs parallel to the costal border on the left side, the anterior wall of the stomach was stitched with fine silk to the parietal peritonæum near the edges of the wound. This shut off the peritoneal cavity. The anterior wall of the stomach was next incised obliquely downward and to the left for a distance of about two inches, the incision being carried through

the serous and muscular layers only, which were dissected loose from the submucosa on each side, to make a bed for the rubber tube now to be placed in the gastric wound. This tube (a soft rubber catheter, No. 20 F.) was then incorporated in the stomach wall by sewing the sero-muscular flaps over it with fine



black silk. At the lower angle of the stomach-wound a small opening was made through the mucous membrane, and the rounded tip of the catheter was introduced into the cavity of the stomach. A final stitch closed the stomach-opening tightly around the catheter. The closure of the abdominal wound followed, and before applying the bichloride dressing two ounces

of warm peptonized milk were injected into the stomach through the catheter. Time of operation, one hour and ten minutes.

No post-operative complications occurred. Because of the pronounced state of inanition, inunctions of cod-liver oil and cocoa butter were given alternately every four hours; nutritive enemata were given every four hours; the stomach received two ounces of peptonized milk every two hours, with one grain of arsenic, 2x, dissolved in the milk. Later, a special liquid diet was given.

And now comes an interesting point in the case. While her dysphagia varied in degree last spring, it was literally complete for several weeks before the gastrostomy. As far as could be judged, not a drop of fluid passed beyond the point of obstruction. One ounce swallowed (?) was ejected, one ounce by measurement. However, one week after the operation it was found that swallowing was possible, and to-day four ounces of liquid can be disposed of in from forty-five to sixty minutes. This gives us hope of yet being able to accomplish something by dilatation.

The tube is not worn continuously, and there seems to be no tendency upon the part of the fistula to contract.

As to the kind of obstruction present in this case, I believed from the beginning that it was cicatricial, the result of a deep-seated abscess, which perhaps ruptured into the œsophagus, or disappeared by absorption. In either case a cicatrix could result. To be sure, cicatricial strictures of the œsophagus are commonly caused by the swallowing of lye, ammonia, acids, etc., and also by tubercular and syphilitic ulcers. They are usually situated at the beginning of the œsophagus,—the level of the cricoid cartilage. Richardson (*Boston Medical and Surgical Journal*, January, 1892) and Zenker (*Observata Anatomica*) each reports a case of cicatricial atresia of the œsophagus, though in neither case could a history of swallowing an escharotic be obtained, nor could any cause whatever of stricture be found.

After presenting this case to the Society I made several persistent attempts to introduce a bougie into this child's œsoph-

agus, but failed absolutely. At times swallowing is improved, and sixteen ounces of liquid food will disappear in forty-five minutes. The patient's general condition has changed wonderfully for the better; still, I intend to make further efforts to dilate the œsophageal lumen at the point of obstruction.

TREATMENT OF SURGICAL SHOCK.

R. C. PITCAIRN, M.D., PITTSBURG.

We have all often seen and constantly see cases of shock during or following operation, or from mental as well as traumatic injury; besides, many deaths occur each year from simple shock. Dr. Da Costa, to my mind, gives the best definition of shock when he says: "It is a sudden depression of the vital powers arising from injury or profound emotion, acting on the nerve-centres and inducing vasomotor paralysis; the blood accumulating in the abdominal vessels."

Now, I do not intend to take up your time with the causes of shock, as they are but too well known, or with the pathology, as it is so little understood even at the present day. But I will tell you, in place, what I consider the legitimate and best treatment for surgical shock.

Proper care should, of course, be taken with the anæsthetic both in choosing and giving it, and the preparation of the patient properly attended to. But occasionally during an operation, after all these details have been attended to as they should be, suddenly we find the patient in intense shock, dilated and immobile pupil, profuse sweating, cold extremities, pale bluish appearance of the body, feeble pulse, shallow respiration, and generally subnormal temperature. Then comes the question, "What are we to do?" for what is to be done must be done quickly. I unhesitatingly say, first, a hypodermic of strychnia or atropine; I think the atropine is especially useful in all cases, but more so if there is profuse perspiration, as there generally is. Hypodermic injections of brandy are often

used, but I consider them of about as much value as the same amount of water. Saline injections I consider the best of all, especially if the patient has lost much blood. I use one drachm of salt to one pint of water, temperature 110°, and inject into the venous system. The patient should then be got to bed and a quart or more water, same temperature and same strength solution, given as an enema. The best normal salt preparation is made from the compressed tablets manufactured by the Fraser Mfg. Co., according to Dr. Geo. R. Fowler's prescription. They contain:

	Grains.
Sod. chloride,	$11\frac{2}{3}$
Sod. sulph.,	1
Sod. carb.,	$\frac{2}{3}$
Sod. phos.,	$\frac{2}{3}$
Mag. phos.,	$1\frac{2}{3}$

In case the operation has been abdominal, I would always advise flushing the abdomen thoroughly with the same solution, as it greatly lessens the danger of shock. Another point I wish to call your attention to is that, following an injection of salt solution, the temperature will often go very high for a few hours. I have seen it in one case go over 106° and the patient live, but this was in a very severe case, while the temperature had for an hour been below 96°, and a great quantity of blood had been lost.

In brain surgery, to prevent shock, I would advise the giving of calomel some hours previous to operation, and the giving of a salt enema immediately following. This is the only time I ever advise the use of calomel, and here I find it extremely useful, as it carries off the foreign ptomaines and tends to lessen the danger of shock.

Ten to twenty drops of turpentine to a pint of water, temperature 110°, can also be used to advantage as an enema, especially if the intestines have been much handled by the operator. A quart of strong, hot coffee is another good enema.

The aforesaid enemas should be held in with the hand, if necessary. Oxygen should be given at once, if necessary, if the breathing is very labored. Hot-water bags, of course,

should be used, and every effort made to bring the temperature up to normal.

In hospital practice we find the electric baths of great use in cases of this variety. The best medicine I have found to be drop doses of camphor tinct. or ver. alb. 3x, aconite 1x, or china tinct. These remedies, if properly used, will often relieve a slight attack of shock at once. Drop doses of gels. tinct. I have found especially useful in women following shock of childbirth. Never operate while the patient is in shock, unless absolutely necessary to control hæmorrhage. I have seen a number of men operate while a case was in this condition without giving an anæsthetic, which I consider merely a criminal offence, as the cases have generally died, while the operation could have safely been postponed.

In case you fear shock in a patient it is a good plan always to give a hypodermic of strychnia or atropine, or five to ten drops of digitalis tinct., a few minutes previous to the operation.

In cases where the patient has had an attack of shock while under the knife, it is generally and justly charged to the anæsthetist.

Now, gentlemen, in the Pittsburg Homœopathic Hospital we have had very few cases of shock on the table, and the reason to my mind is that we still use Dr. Northrop's method. I am a firm believer that chloroform and oxygen is the best known method of giving an anæsthetic. Although it takes longer to anæsthetize a patient, the oxygen alone is a guarantee of safety and a preventive against shock. We have our first case to lose from chloroform and oxygen, and I hope fortune will continue to smile on our anæsthetist, as it is a thankless job.

The prophylaxis of surgical shock can be summed up in three words: thoroughness, time and temperature. By thoroughness, I mean thorough preparation of patient and the anæsthetist's skillful handling of the case. By time, I mean the quickness of the operator. By temperature, the proper care of patient during and after operation as regards heat-surroundings. I consider undue carelessness in this respect one of the most potent factors in producing surgical shock.

DISCUSSION.

Dr. J. W. Hassler: In regard to surgical shock as treated at the present day, you will find frequently, especially in hospital practice, the anæsthetist glories in telling how many cases of infusion he has had after a year's service. No matter how small the pulse or the condition of respiration, the first thought, instead of allowing the patient to rest, is to infuse. If we look, in the first place, at what shock is, we find that it is simply an exhaustion; that it is simply that the nervous system is tired out. When a person is tired in the body he goes to bed and gets rest.

More cases die from over-stimulation after operation than under the anæsthetic. I believe that in all cases of shock—I do not mean "collapse"—we have an exhaustion of the nervous system—a paralysis of the vasomotor centres. Let the patient go to bed for an hour, with hot applications, perhaps with a little strychnia or atropia—strychnia is best—allow the patient to rest; if carefully watched and he does not react, infusion may be called for. The best treatment in surgical shock is to put the patients to bed; let them rest; leave them alone.

Dr. B. W. James: I have seen quite a number of cases in my day, and I think those cases will be largely aided by giving some such remedy as carbo veg., arsenicum, or some remedy that would enable the vital powers to come up. I believe in treatment by homœopathy, and I believe that in cases of shock we ought to leave them to homœopathy.

Dr. R. C. Pitcairn: I believe the first thing to use in surgical shock is a salt enema. Salt enema, of course, we use for abdominal operations, flushing out with salt and water. And in cases of surgical shock in brain surgery or abdominal surgery, you will find that salt enema will beat medicine every time.

Dr. R. E. Tomlin: I would like to ask the doctor if he has ever considered in a case of shock something that I have noticed in a number of cases in connection with abdominal surgery, where, as a routine practice, rectal enemas are given for cleansing the bowel—that is, the giving of large doses of purgatives.

I have noticed in some cases where the bowel has been in a relaxed condition, as well as from the general nervous relaxation; I have seen some of these patients given large doses of purgatives, which in some cases might have been justifiable, but it seems to me in other cases not so. The result was that in twenty-four hours the patients' nervous and physical systems were depleted. I have seen some cases fail to react, in which, to my mind, after thoroughly reviewing all the factors, it seemed to be a possible cause. When we consider that the patient's life is at stake, I feel that it ought to be considered, and I would like to ask Dr. Pitcairn or Dr. Hassler if they have noticed any bad results where large doses of purgatives had been given.

Dr. J. H. McClelland: It looks to me, Mr. President, as if everybody was right. To my mind it seems that there is a distinct sphere for each of these methods of treatment. Shock is an exhaustion of the nerve-centres, and there are two ways of remedying that. Will we stimulate that with alcoholic stimulants or with salt water, or will we do as Dr. Hassler says, put them to bed and let the unaided efforts of nature do the rest, or will we give what we know to be an assistance to the organism which has no bad reaction? There is no reason in the world why the homœopathic remedies should not apply here as anywhere. Where there is loss of fluids, supply the fluids. In shock there is seldom that for a cause. As I understand it, surgical shock, as discussed by the paper very carefully, is not caused by loss of fluids. Then, what must you do? You want to restore the organism to its normal activity. Put your patient to bed, and then give what would best assist the organism to recover, which, in my opinion, in a large majority of cases, is the homœopathic remedy. There is no doubt about the sphere of camphor, veratrum album and arsenic—not the slightest. And while I agree with much that my colleague, Dr. Pitcairn, has said (for he has had considerable observation and experience), it is true that we sometimes forget what is the very best means of restoring the effects of shock.

ORIFICIAL SURGERY.

W. G. STEELE, M.D., PHILADELPHIA.

In offering a paper on Orificial Surgery I can only hope to present some of the salient features embraced in an understanding of that branch of work, as the literature is entirely too voluminous to permit of even a *résumé* to be presented in a paper of the length desirable for this occasion.

Hence I shall quote from Prof. E. H. Pratt, the founder of Orificial Surgery, the following:

"There is but one direct means by which man's physical being is developed, by which it is maintained in normal condition, and, when broken down, by which it is restored to a condition of health. Hence there is one chief thing to which the various measures employed for the relief of bodily ills should be directed. It matters not what the measures may be—whether they consist of the administration of drugs, the application of massage, electricity, bathing, mental influences, or any other mode of treatment—all are directed to this one thing, viz.: *The circulation of the blood.*"

There is not a pathological lesion that does not have its beginning in blood stasis.

To re-establish and to maintain a normal circulation, local and general, is, therefore, the great problem that demands solution in the successful treatment of chronic diseases, both medical and surgical.

It is well known that upon nerve-force alone the circulation depends for its activity; hence a proper supply of nerve-force means a good circulation, with all its blessings; a waste of nerve-force, or a low tone of the nervous system, means an enfeebled circulation, with its various forms of unfortunate sequences.

The special nerve-force which presides over the circulation of the blood is the great vasomotor system, which is formed by an intermingling of fibres from both the cerebro-spinal and the sympathetic systems of nerves, and by means of this double

influence two things may cause tears to moisten the eyes, viz., a foreign body or an emotion. Two things may empty a stomach—an emetic or a disgusting suggestion. Two things may excite the sexual system to activity—some form of physical irritation or an emotion; and so on throughout the entire list of bodily activities.

The cerebro-spinal system goes to sleep every night; is paralyzed under the action of an anæsthetic, and in every way it is unreliable as a steady provider of nerve-force.

But the sympathetic nerve, fortunately for our maintenance, is tireless; it sleeps but once, and that sleep is final. By night and by day, in rest and in toil, under *all* conditions and at *all* times, without the aid of the cerebro-spinal system, the sympathetic force is still maintaining the functions of animal life.

The function of the cerebro-spinal system is to carry out the willful acts of the body, and to perceive the various sensations with which consciousness makes us familiar; it also distributes motor filaments to all the voluntary muscles of the body, which act only when the individual wills them so to do.

The sympathetic system is composed of different (sensory) nerve filaments, which are distributed to the mucous membranes, and supply the one common sensation peculiar to the sympathetic, but unknown to consciousness, unless the sympathetic be responsible for the sensations of hunger, thirst and bodily desires.

The afferent nerves of the sympathetic are distributed to the involuntary muscular fibres throughout the body. These fibres are arranged in layers, which form one or more of the coats of every tube in the body.

The blood-vessels, digestive and respiratory tracts, and the ducts of glandular structures, are all supplied with coats of these involuntary muscular fibres, the arrangement of which, being both longitudinal and transverse (circular), in every instance secures, by their alternate constriction and shortening, the vermiform motion by which all solids and fluids of the body are propelled along their various channels.

The sympathetic also supplies the entire sexual apparatus of each sex. The sexual organs and the rectum are central

telephones and run lines of communication to the top of the head, the soles of the feet, and to every square inch of bodily tissue between these extremes, and these facts can no longer be ignored with impunity.

Thus we see that the relations thus established by the sympathetic nerve between the various parts of the human body are very close and delicate, and a disordered function of one part can disarrange and disturb to a greater or less extent the harmonious action of any or all the other parts.

Since the sexual organs in both sexes get their nerve-supply from the sympathetic system, whatever wastes sexual power in either sex causes a waste of sympathetic nerve-power, and therefore lowers the nervous tone of the entire sympathetic nervous system.

Continued, unremitting contraction of any muscle or set of muscles, voluntary or involuntary, if excessive, is exhausting in its effects on either nervous system.

As sympathetic nerve-exhaustion is seldom manifested by pain or sensations appreciable by the mind of the patient, but rather exhibits its manifestations by disordered function of one or more organs of the body, it is rather difficult to illustrate an example except by actual work involving this system. However, most of us are so familiar with the effects of circumcision, properly performed, that we will allude to this as the example of the beneficial effects to be derived by stopping nerve-waste by removing irritated nerve terminals.

On the cerebro-spinal system we can furnish many examples, as its effects are more manifest to our ordinary sensations. For example, try holding the fist tightly clenched for an hour, and observe the marked fatigue experienced throughout the entire system. The effects of tonic spasms of involuntary muscular fibres are equally disastrous in their consequences, although, as previously stated, the effects are indicated by functional disorders, and are seldom accompanied by pain, hence are apt to be misinterpreted.

As the lower openings of the body each have two sphincter muscles, the outer one controlled by the voluntary (cerebro-spinal) nervous system, while the inner is under the control of

the sympathetic, we can see that any irritation capable of exciting tonic contraction of either or both sphincters will be manifested by results in accordance with the nervous system mostly involved in the waste of nervous energy, precisely as is shown in the experiment of the tightly clenched fist.

The following assertion was made as early as 1887 by Prof. E. H. Pratt:

"In all pathological conditions, surgical or medical, which linger persistently in spite of all efforts at removal, from the delicate derangements of brain-substance that induce insanity, and the various forms of neurasthenia, to the great variety of morbid changes repeatedly found in the coarser structures of the body, there will invariably be found more or less irritation of the rectum, or the orifices of the sexual system, or of both."

"In other words, there is one predisposing cause for all forms of chronic diseases, and that is nerve-waste occasioned by orificial irritation at the lower openings of the body."

The above was written twelve years ago, since which time the many thousands of operations performed by Prof. Pratt and his hundreds of followers have proved conclusively that this is a law of cure, destined to take its place with the one to which we all subscribe—*similia similibus curantur.*

Orificialists do not wish to exclude the reflexes of the upper orifices of the body, knowing full well the many wonderful cures that may be accomplished by removal of sources of irritation from the ear, nose and throat, or by stopping the waste of nerve-energy involved in the continued muscular contraction rendered necessary by misshapen eyes, let them be either hypermetropic, myopic, or astigmatic, as, in order that the function of the eye may be successfully carried on, the eye is more or less constantly endeavoring to correct its own deformity according to the requirements placed upon it, and this always means strain. The beneficial effects to be derived by correction of eye-strain by suitable glasses, thus lessening or obviating the constant muscular action made necessary by the eye endeavoring to carry on its function properly, does not stop with the improvement in vision only; but many cases of the most varied general conditions in organs remote from the eyes, yes,

and even insanity, have been cured by removing this source of irritation.

Yet notwithstanding the brilliant results obtained by the eye, ear, nose and throat specialists, cases are met where the relief of eye-strain does not cure the conditions of which it seems so evidently the cause, or the asthma still persists after the removal of the polypi and correction of nasal deformities. These are the cases where orificial surgery, by removing still more causes of nerve-waste, enable the system to regain that health equilibrium so necessary for our well-being.

Orificial surgery is not a rival of any system of practice, nor do its followers subject all cases coming under their charge to operative procedures; but in cases that have had good treatment, and, notwithstanding the efforts of their former attendants, do not get well, but seem to be steadily losing ground, so that a life of chronic invalidism or an early death seems to be the only outlook for them, these are the cases where orificial surgery comes with the helping hand, and by correcting the sources of nerve-waste so improves the condition that the patients bound into health at times almost miraculously, notwithstanding years of former suffering, or are placed in a position where the skillful resources of their attendants meet with responses that were impossible so long as the original irritations continued to sap the vitality of the poor sufferer.

This uncorrected nerve-waste is the explanation of why our well-selected similimum at times entirely fails to accomplish the results we so confidently anticipate from its administration.

The unthinking members of the profession frequently indulge in what they fondly believe to be a joke at the expense of the orificialists, by their frivolous allusion to stretching the sphincter. The very best answer to this joke is to do what many a good and worthy fellow has done before, that is, simply try it; then you will appreciate where the laugh properly comes in; there will be *two* to enjoy it then, instead of one—your patient will join with you in appreciation of the good point made.

Some physicians pretend to believe that the orificialists are

so carried away by their methods that they will claim to cure everything and everybody. Nothing is further from the truth. It is true that the cures wrought by the proper application of orificial methods, at times, are sources of great surprise and wonder to its followers; but so, likewise, are some of the failures at times experienced; but where is the system of cure that will work every time without a failure? If a man presents such a claim to me, I assuredly would feel tempted to "stretch his sphincter" good and hard, with the hope of so equalizing the circulation of his brain as to permit of some reason and sense finding lodgement therein.

I may say that my experience with the followers of orificial methods (extending, now, for a period of over eight years) shows me that the advocates of this method of treatment, composed, as they are, of members of all schools of medicine, are bright, energetic, well-read, go-ahead men, whose aim in life is to cure the sick irrespective of "pathy or ism," and men who have learned from experience the wonderful results to be obtained by following these methods in a class of cases that without them would be entirely hopeless—the cases that have resisted all other methods of treatment—in other words, the cast-offs of the medical profession.

Only this last summer, at the Eastern course of instruction in Orificial Surgery, delivered by Prof. E. H. Pratt at the Muncie Island Sanatorium, fully one-third of the members of the class submitted themselves or the members of their families to the full correction of orificial irritation, while the majority of the other members either had been operated on, or, if in poor health, were contemplating such work being performed on themselves. Can you ask for a stronger confirmation that the advocates of this system *believe what they practice* than their willingness to submit to the necessary operations on themselves, or on those who are dear to them?

SOME UNUSUAL ABDOMINAL CASES.

WALTER STRONG, M.D., PHILADELPHIA.

1. Displaced and movable horse-shoe kidney of the right side, with absence of kidney upon the left side.
2. Extensive abdominal adhesions involving the stomach, the result of repeated abdominal operations.
3. Removal of a large ovarian cyst under cocaine, with some observations upon the sensitiveness of the peritonæum.
4. Extensive deposit of fatty tissue upon the inner surface of the peritonæum, simulating an abdominal tumor.
5. Cæsarian operation.
6. Poro-Cæsarian operation.
7. Traumatic displacement of the liver.
8. Traumatic displacement of the spleen, splenorrhaphy, with report of the result three years after operation.

Abdominal surgery furnishes us with a great variety of cases, many of which are unusual and of special interest, and it has occurred to me that possibly a few such cases might prove of interest to the members of this Society. You have so frequently had your attention called to long lists of the more common abdominal operations that I am going to eliminate all such from this paper, and present for your consideration the essential details of a few unusual abdominal operations.

All of the cases here reported were operated at the Women's Homœopathic Hospital, Philadelphia, and to save unnecessary repetition I might explain that it is my custom to conduct all such operations under strict aseptic precautions, normal salt solution being employed for all solutions, mops and irrigation. Previous to operation the bowels are thoroughly cleansed by a brisk purgative (licorice powder), after which the patient receives no medical treatment other than the homœopathically indicated remedy. At the close of each operation the abdominal cavity is irrigated with sterile normal salt solution at a tem-

perature of 110°, and the abdomen then closed with it full of this solution, which is rapidly absorbed into the circulation, thus reducing the attending shock and the patient's thirst to a minimum. Following operations a high rectal injection of salt solution is given, by means of a rectal tube, every three to four hours, until flatus is expelled, when feeding by stomach is commenced. Stitches are removed upon the tenth day, and patient is kept in recumbent position for one month following operation, thus most effectually guarding against the formation of a ventral hernia. For the following histories I am indebted to our resident surgeon, Dr. Russell, who has been my first assistant during the past eight years:

Displaced and Movable Horse-shoe Kidney of the Right Side, with Absence of Kidney upon the Left Side.—Mrs. C., aged 22 years; white; married; American. Admitted to the Women's Homœopathic Hospital October 19, 1898. Family history good, and patient has always enjoyed good health. Has had one child, two years ago, after an easy and short labor. During the past three years has complained of a lump in the right side of the abdomen; this lump is very sensitive to touch, and the least exertion upon part of patient causes much pain and distress in abdomen, the pains being of a sharp, drawing character, and always aggravated by motion. Bowels regular and urine normal. Has been in two other hospitals for treatment of the present trouble, and at each of these institutions no diagnosis was made. Examination reveals a firm, regular, movable mass upon the right side of the abdomen, extending slightly to the left of the median line and just above the level of the umbilicus; is very sensitive to touch and freely movable; impulse from aorta transmitted distinctly. Diagnosis at this time reserved, and exploratory incision advised and accepted.

Operation on October 24th. Ether. Incision made in median line from the umbilicus upwards, abdominal cavity opened; examination through this opening reveals a firm, round, regular mass, located beneath the posterior peritonæum and freely movable beneath it. Abdominal opening enlarged, intestines displaced to the left and posterior peritonæum incised, mass drawn forward and inspection reveals a peculiarly

shaped kidney; in fact, there are two kidneys joined together, end to end, in the form of a horse-shoe; the connecting bridge of tissue is quite dense and appears to be of kidney tissue. The convexity of the mass is directed upward and inward, and from the inner margin of each kidney springs a separate set of blood-vessels and two ureters, which latter remain separate and distinct, so far as the fingers can follow. Careful examination of the left flank in the kidney region reveals an absence of kidney upon that side. So we then decided that we had a most unusual condition to deal with, and only one line of treatment appeared to be indicated. The kidneys were now returned to their abnormal position upon the right side, and by means of several silk sutures were firmly attached to the underlying muscles; peritonæum was then stitched together over them by means of a continuous silk suture, and the abdomen closed without drainage.

Following operation there was nothing of importance to note, convalescence being rapid and uninterrupted, and no trouble with the function of the kidneys. Patient discharged December 2, 1898, in a very comfortable condition. Examination at time of discharge reveals the mass located deep in the right side of the abdomen, is immovable, and only slightly sensitive upon firm, deep pressure.

This was certainly a most unusual case; in fact, so far as I have been able to learn, it is absolutely unique in surgical history. Even horse-shoe kidneys are very uncommon, and where found they are usually located one upon either side of the spinal column and connected by a thin band of tissue. But in this case we had both kidneys located upon the right side, and even in this abnormal position they were freely movable, while the connecting band was very firm and dense, appearing to be composed of true kidney tissue. Under the existing conditions I am not surprised that a diagnosis before operation was impossible. It was no doubt a congenital condition, and caused neither pain nor discomfort until it became movable and drew upon its attachments. The relief obtained was nothing more than we would ordinarily expect after the usual operation for a movable kidney.

Extensive Abdominal Adhesions Involving the Stomach the Result of Repeated Abdominal Operations.—Miss T., aged 19 years; white; single; American. Admitted to Women's Homœopathic Hospital February 3, 1899. The family history was poor, there being tuberculosis. Patient enjoyed excellent health until three years ago, when she was operated upon at another hospital for appendicitis, which operation only gave temporary relief and necessitated a second operation four months later. The exact character of this second operation is not clear, and I have been unable to learn its exact nature, but in it the incision was made in the median line, so that it was probably of an exploratory nature. This second operation also failed to give the desired relief, and the patient grew gradually but steadily worse, experiencing constant pain and distress in the abdomen, and persistent vomiting, together with an inability to thoroughly empty the bowels. So severe did these symptoms become that she finally submitted to another operation, which was performed about twelve weeks previous to coming under my care. This operation was for the purpose of breaking up intestinal adhesions, but was unsuccessful. Upon admission to the hospital, an examination revealed a greatly distended abdomen, which was everywhere sensitive to the touch, but especially so on the right side—patient also suffering from persistent retching and vomiting, which distressed her very much; also inability to expel flatus or fæcal matter. The patient was put upon liquid diet and medical treatment, but without any improvement. Finally her condition became so desperate that we advised operative interference, to which patient readily assented. Operation March 18th. Ether. Abdominal incision slightly to the right of the old scars. After much difficulty entrance was obtained into the abdominal cavity, where we found that adhesions existed in every direction and between everything. Abdominal opening was now extended from the pubis to the ensiform cartilage, and then commenced a systematic separation of all the adhesions. Where not too dense they were simply torn apart, but in many places it was necessary to divide them between a double ligature, and in several instances it was found necessary to repair

rents in the intestines. The adhesions of the intestines to the old appendicitis-scar upon the right side were very firm and dense, as were also those to the upper portion of the median scar; at this point there existed very firm adhesions between the stomach and the scar, and it was with much difficulty that a separation was effected. Finally, after a lengthy and tedious operation, all the adhesions were divided, and then a systematic search was made for all raw surfaces, which were dusted with sterile aristol, as advocated by Meyer, after which the abdomen was closed in the usual manner. The shock following this lengthy operation, which had lasted nearly three hours, was quite considerable, but patient gradually rallied and an uneventful convalescence was established. The vomiting ceased and bowels commenced to move naturally; patient's general condition improved so much that she was discharged on June 12th, in apparent perfect health. This was certainly a most desperate case, and well illustrates the value of aristol in the treatment of intestinal adhesions, without which I am of the opinion we could not have secured so happy a result.

Removal of a Large Ovarian Cyst under Cocaine, with Some Observations upon the Sensitiveness of the Peritonæum.—Mrs. M., aged 61 years; white; married; German. Admitted to Women's Homœopathic Hospital October 22, 1898. Family history fair, two sisters having died of tuberculosis. Puberty at 17. Married at 29. No children or miscarriages. Patient has had a persistent cough since a child, it having developed following an attack of measles. Has been troubled with asthma since 30 years of age, but the attacks have not been severe until three years ago. Menopause at 49. During the past two years has experienced a heaviness upon the right side of abdomen. About three months ago patient noticed an increase in the size of the abdomen, which has enlarged rapidly during the past two months. Complains of much pain and distress in abdomen; also from severe asthmatic attacks, which prevent patient from assuming the recumbent position; has frequent fainting spells; appetite poor; loss of flesh as well as of strength. Upon admission, patient is very much emaciated, extremely weak, pulse weak and irregular, breathing much oppressed.

Examination of abdomen reveals the usual signs of a large ovarian cyst, which occupies the entire abdomen and is pressing everything upwards against the diaphragm. Examination of chest shows mitral lesion and asthma. Patient's general condition was such that a general anæsthetic was out of the question, so after plainly stating the existing conditions to the patient she agreed to an abdominal operation under cocaine, which I advised, but patient's condition was such that even the most sanguine amongst us hardly dared hope for a successful termination of the operation. Operation October 24th. Cocaine injected at three points in the proposed line for the median incision, and at several times during the operation a few drops were added to the cut surfaces—the total amount of cocaine employed in the operation being only one drachm of a 2-per-cent. aqueous solution, representing exactly one grain of cocaine. The abdominal incision was made with absolutely no pain to the patient. Some adhesions between intestines and sac were readily broken up, the contents of the cyst were slowly drawn off with a trocar, after which the cyst-sac was delivered from the abdominal cavity and the pedicle ligated in two sections. Abdominal toilet completed and wound closed with nine silk-worm-gut sutures, dry aseptic dressings applied, and patient returned to ward. Time of operation, sixteen minutes. Pulse before operation, 88; after operation, 116. Following operation patient seemed to improve, the wound healed kindly, and all of the sutures were removed upon the eighth day. Upon November 2d patient had a severe attack of syncope, from which she never thoroughly recovered, and grew gradually weaker, dying at 6 P.M., November 4th.

To me this was a most interesting and instructive case. The mere fact of performing an abdominal operation with my patient conscious was a novel experience. The patient, according to her own statement, did not suffer much pain at any stage of the operation. Dividing the abdominal walls was absolutely painless. The separation of the adhesions caused some slight pain, while the traction upon the pedicle and the tying-off was the most painful portion of the operation. While operating, I made some mental notes upon the sensitiveness of the non-cocainized

peritonæum. I discovered the parietal peritonæum to be but slightly sensitive to either touch or incision, while the peritonæum covering the intestines and various organs was quite sensitive to even touch. I also found the peritonæum to be very sensitive to heat, water at a temperature of 110 degrees being quite painful, and from my experience in this single case I can readily understand the confusion which exists at present regarding the sensitiveness of this delicate membrane. The operation well illustrates the great possibilities of local anæsthesia, and we were all very much surprised to learn that such a formidable operation could be carried out painlessly with the use of such a small amount of cocaine as a single grain. At a future time I hope to be able to present further details upon the use of cocaine in connection with abdominal surgery.

Extensive Deposit of Fatty Tissue upon the Inner Surface of the Peritonæum Simulating an Abdominal Tumor.—Mrs. R., aged 51 years; white; widow; German. Admitted to Women's Homœopathic Hospital November 6, 1896. Family history of tuberculosis and syphilis. Puberty at 16 years of age. Has had four children and no miscarriages. Enjoyed excellent health until three years ago, since when she has been troubled with diarrhœa and pains in abdomen. Pain in abdomen very severe at times, and always made worse by least exertion. Upon admission, examination revealed a well-nourished woman with a large, prominent abdomen; heart, lungs and kidneys are negative. Palpation of the abdomen reveals a large semi-solid mass in the right side of the abdominal cavity, immovable and somewhat painful to pressure; transmits aortic impulses very plainly. Also has much pain and sensitiveness all over the abdomen upon deep, firm pressure, which pain is usually referred to two points high up upon the right side of abdomen. Pressure causes some nausea, and is immediately followed by a desire for stool. Patient was kept under observation until November 24th, and as the pain appeared to increase, an exploratory operation was suggested and accepted. Operation November 25th. Ether. Incision in median line midway between umbilicus and ensiform cartilage; upon opening the abdomen we discovered a large mass of fatty tissue growing from the inner surface

of the anterior parietal peritonæum, which was excised, and bleeding points caught with deep stitches. Then making a further examination of the abdominal contents, we discovered that the liver in the region of the gall-bladder was one mass of adhesions; abdominal opening was enlarged, and these adhesions broken up, revealing a greatly distended gall-bladder, which was completely filled with gall-stones. Gall-bladder brought to the surface and incised, evacuating a large amount of bile and pus, together with a large assortment of gall-stones; after all these stones had been removed we discovered three stones wedged in the common bile-duct which were finally removed; the edges of the gall-bladder were then stitched to the edges of the abdominal wound, and its interior packed, after which the abdominal opening was closed. Convalescence uninterrupted, and patient discharged on February 7th, at which time there still remained a fistula, which required another operation for closing in May. After operation we counted the stones which were saved, and found 166, the largest the size of a shellbark and the smallest the size of a large grain of rice, the weight of which was 420 grains.

The growth of fatty tissue in this case was a most unusual condition—one which I had never seen before, and one for which I have been looking ever since. Upon examination it gave the exact impression of a semi-solid abdominal growth, and was well calculated to puzzle the most expert. As soon as we found this condition we at once had explained the growth; but there still remainded the pain to account for, and this led me to further explore the abdominal cavity, with the result already stated. Of course, I claim no credit for the fortunate termination of this operation; I simply started with the idea of exploring for the cause of the trouble, and, in fact, I was only fortunate enough to make one of those lucky surgical blunders which we all meet with occasionally. The gall-bladder was greatly distended and suppurating, in fact at one point was almost ready to break; and with it all there was no evidence of jaundice, a fact which renders the case all the more interesting.

Cæsarian Operation.—Mrs. B., aged 26 years; colored; married; American. Admitted to Women's Homœopathic

Hospital November 24, 1897. Family history good. Patient always enjoyed good health, but had Pott's disease during childhood. Had a miscarriage at second month one year ago. Upon admission patient was in advanced stage of labor, with a history of its having started forty-eight hours previously; no physician was called until the morning of admission to our hospital, and he, upon examination, recommended that she be removed to a hospital for treatment, which proposition was not accepted until evening. Examination revealed a vertex presentation, together with a very much contracted pelvis, in which the sacrum was very prominent. Measurements with pelvimeter were as follows: Antero-posterior six and one-half inches ($6\frac{1}{2}$), spines nine inches (9), crests ten inches (10). Patient's general condition fair, very nervous and somewhat weak. Cæsarian operation advised and accepted. Operation at 6.40 P.M. November 24th. Ether. Abdominal incision from pubis to ensiform cartilage; peritonæum divided the same length. Uterus delivered from the abdominal cavity, the base of uterus now encircled with a heavy rubber cord, abdominal cavity protected by means of sterile towels. Six-inch vertical incision now made in the anterior wall of uterus; living child delivered, together with placenta and membranes. The uterine cavity was now thoroughly cleansed and sterilized with boiling water and live steam, after which it was closed by means of seven interrupted sutures of very heavy silk, which were introduced into the uterine walls just short of the mucous lining of the uterus. Constricting cord of rubber was removed and uterine contractions stimulated by means of manipulations and application of hot towels. Abdominal incision closed layer by layer and a dry aseptic dressing applied. The after-history of the case is unimportant, excepting a small breast abscess, which was opened December 10th, after which there was no trouble, the mother and babe being discharged January 24th in most excellent condition.

Such an operation is a most simple affair, and if deliberately planned so that all aseptic precautions may be observed, should yield brilliant results. To my mind the safest plan is to make a liberal abdominal incision through which the uterus may be

delivered, and then the remainder of the operation is completed outside of the abdominal cavity. A short incision has absolutely nothing to recommend it, and materially increases the danger of septic infection from the contents of the uterus. The operation can be rapidly performed after the manner just described, and with the constricting band around the cervical portion of the uterus, which is not absolutely essential, it is practically a bloodless operation. In fact, I think the time has now arrived when this operation should cease to be looked upon as one of last resort, and I have no hesitancy in saying that I consider it to be safer than a craniotomy, and think it should be given the preference over it.

Poro-Cæsarian Operation.—Mrs. M., aged 22 years; white; married; American. Admitted to the surgical wards of the Women's Homœopathic Hospital at 4.30 P.M., July 2, 1899. Was married in July, 1898 and menstruated regularly until September 25, 1898, when menses ceased, the usual symptoms and signs of pregnancy developed, and confinement was expected about July 7th. Labor pains came on about eleven o'clock, June 29th, and the membranes ruptured at 3 A.M. the following morning; but progress was very slow, and upon the morning of July 2d several attempts were made to deliver with forceps under ether, but with no success, and it was finally decided to have patient removed to a hospital for the necessary treatment. Admitted at 4.30 P.M.; patient in a very weak and nervous condition, much nauseated from effects of ether, pains very severe and almost incessant. Examination reveals a vertex presentation, severe lacerations of the cervical tissues and a much contracted pelvis. Pelvimeter measurements as follows: Spines, ten inches (10); crests, ten inches (10); antero-posterior, six inches (6), with the sacrum projecting like a large mass into the pelvis very low down. Fœtal heart sounds doubtful. Advised Cæsarian operation and received the necessary consent. Operation at 7.15 P.M. Ether. Long median abdominal incision through the abdominal walls, delivery of uterus from abdomen, uterine arteries under finger-pressure of assistant. Longitudinal incision through the fundus of the uterus (as advocated by Fritsch) with rapid delivery of the child, placenta

and membranes. The pressure at uterine arteries by assistant was most effectual, there being no bleeding. Uterus failing to show evidences of contracting it was determined to remove the uterus and appendages, which was accomplished in short order. Abdominal toilet made, sutures introduced in the usual manner, dry aseptic dressing applied and patient returned to ward. Time of operation fifty minutes. The child, after being delivered, made a few feeble attempts at respiration and then died; but an examination of the child's head explained this, as it had been literally crushed out of shape in attempts at instrumental delivery. Recovery from shock was slow but complete, and all progressed very favorably until the fourth day, when the temperature went up to 105°, respiration to 60, and the pulse to 140. Examination revealed a double lobar pneumonia, for which she received the indicated remedy (bryonia), and the patient gradually improved, and was discharged August 5th in excellent robust condition. This case is a most excellent illustration of how much some patients can stand and yet recover. Here was a most unfavorable case, one which had been greatly mismanaged and weakened by instrumental manipulations which were anything but gentle, leading to extensive lacerations of the cervix, and yet the patient went through the formidable Poro operation, together with a severe attack of pneumonia. The decision here to remove the uterus was a most wise one in view of the possibilities of its being already infected, and while it makes the operation a far more difficult one it is, I think, a measure to be adopted in all cases where there is a suspicion of the uterine cavity having been infected. And I am of the opinion that in a very large degree the success of the operation in this case was due to the complete removal of the uterus.

Traumatic Displacement of the Liver.—Mrs. A., aged 30 years; white; married; American. Admitted to Women's Homœopathic Hospital January 21, 1898. Family history good. Patient always enjoyed good health, has had no children or miscarriages. Shortly before being admitted to hospital, while upon a step-ladder cleaning, the patient fell, and in so doing hit the right side of the abdomen upon the blunt end of

a post. Upon admission patient in state of extreme collapse, abdomen distended, sensitive and dull to percussion over the umbilical region. Patient taken to ward and put to bed, free stimulation, condition of patient gradually improved and shock passed off, but the abdominal pain remained. Further examination after patient's condition improved revealed the dull area to be due to a displacement of the liver, the liver having been dragged downwards and to the left. Gentle and long-continued manipulations were rewarded by a partial return of the liver to its proper location, where it was retained by means of the judicious use of padding and a firm abdominal binder. Absolute rest in bed upon the back was continued until all pain had subsided, after which a specially made abdominal support was secured, which the patient still wears. Patient was finally discharged upon February 11th, and since then she has been endeavoring to take things very quietly, with the result that she has had very little trouble.

This case fully demonstrates a fact which is so frequently lost sight of, and that is that nature can often repair a serious injury in a better manner than we. Here was a very unusual condition, a serious internal injury accompanied with much shock, which shock I am free to admit caused me to treat the case in the conservative manner in which I did, and as it terminated it is doubtful as to whether or not an operation could have secured as good a result as we did.

Traumatic Displacement of the Spleen. Splenorrhaphy, with Report of the Case Three Years After Operation.—Mrs. L., aged 33 years; white; married; Italian. Admitted to Women's Homœopathic Hospital October 13, 1896. Patient born in Central Italy, but has been in this country eight years. No history of ever having had malaria, and has always enjoyed good health. Has had five children and no miscarriages. Ten days ago patient fell down stairs and struck upon a bucket, striking left hypochondrium; since then has been confined to her bed and visited by a neighboring physician, but without relief. Upon admission complains of intense sharp pains in the left side of abdomen, extending upwards, and aggravated by motion, pressure, or breathing. Much distress upon taking

food, and some vomiting. Bowels loose and watery and accompanied with much pain. Examination of abdomen reveals a large sensitive mass upon the left side of abdomen, extending from under the left ribs downward to a point two inches below the level of the umbilicus, and extending well over beyond the median line. Very sensitive to touch and freely movable. Diagnosis of an acute displacement of the spleen was made, and patient put at complete rest. Patient insisted upon leaving hospital October 28th, but returned six days later worse than ever. Advised operation, either splenorrhaphy or splenectomy as the condition demanded, to which patient consented. Operation November 19th. Ether. Incision through abdominal wall at the outer border of the left rectus muscle from the ribs downward to the crest of the ilium. Examination revealed a displaced spleen, which was returned to its proper position and held in place in a manner which I have already described in a former article (*Hahnemannian Monthly*, January, 1898), and patient discharged cured December 31st.

This was a most unusual case, and one which attracted a great deal of attention at the time of the operation, inasmuch as I attempted a new operation which had been but recently suggested by several prominent Continental surgeons. And it is to make a further report upon this case that I have introduced it here. I have very recently had the opportunity of examining this patient, and I am pleased to report that the spleen is still firmly in place and causing no trouble or discomfort, and this in spite of the fact that the patient has been delivered of a child at full term since the operation. So after three years time this case is well, and I think can be safely recorded as a permanent cure.

OPERATIVE TREATMENT FOR TETANUS.

LANDRETH W. THOMPSON, M.D., PHILADELPHIA.

When you read Hippocrates' statement (460 B.C.) that "convulsions (tetanus) supervening upon a wound are mortal" (evidently a mortality of 100 per cent.), and lay alongside of it the statement of Dr. Thomas Watson, A.D. 1843, that "the aphorism holds true, with very few exceptions, to the present day," and "under every plan of management a vast majority die;" and to this you add the utterance of Dr. F. C. Skey in 1851 A.D., that "every remedy that ingenuity could devise has been more or less fruitlessly applied to arrest the progress of this fatal malady—they have all failed;" and when you take the statistics of five of the largest and most carefully conducted English hospitals for the two decades ending in 1880 and find the actual mortality from tetanus in these institutions is 83 per cent., you must admit that up to that latter date the progress of surgery and medicine, as they marched onward hand-in-hand through twenty-three whole centuries of time, has been *exceedingly slow.*

We give due credit to the older writers who admit that the pathology of the disease was obscure to them. We also give them credit for observing certain macroscopic changes occurring in sets of nerves, and especially in the spinal cord, the medulla, and a few observed in the brain. Nor can they be held accountable for what they had not the apparatus for finding and for seeing. It is only since modern pathology has found and separated, and stained and seen, and experimented with a pin-shaped bacterium, that a single foundation-stone for future study has been laid.

In brief, we see a rapidly-ascending neuritis, an invasion of the brain and spinal cord with germs, and that they remain more constantly in these central nervous organs than in any other tissues of the body, and by methodical digestion and

analysis three or four deadly poisons are to be secured from the diseased nerve tissues. These germs will infect animals surely with the disease. These poisons will surely kill animals into which they are injected. Other tissues of the body only rarely harbor the germs; but few are found in the blood-vessels of the victims; the wound itself may contain few or no germs at all.

The disease was formerly classed as traumatic and idiopathic, with such a veil of obscurity over the idiopathic cases as to give us a perfect right, based on modern pathology, to ask of them a re-examination for minute or forgotten injuries.

The treatment of the disease has included most of the remedies in the materia medica and not a few operative procedures. Amputation stood out as the chief reliance under the old management, and seemed reasonable enough. Take, for instance, a crushed finger or toe, with consequent tetanus; what could be more rational than to remove the offending part, the plainly visible, tangible cause of the dread disease—a something one can see and probe and dress and redress; of course it ought to be removed, and such amputations were made many times. But lo! the results! In the past centuries, statistics were not made with the same critical judgment as at present; nevertheless a comparatively late series of 220 amputations is presented to us with 24 recoveries, a mortality of 89 per cent.; and this is worse than the general mortality of 83 per cent. from all lines of treatment. We may then not be surprised when such men as Sir Astley Cooper and Dupuytren condemn in unqualified terms the resort to amputation as a curative measure.

As a result of finding, post-mortem, various changes in the main nerve-trunks of a wounded limb, attention has been called to the treatment of these special structures in connection with tetanus. Therefore nerve-section and nerve-stretching has been practiced with varying success. Only a few such cases are on record, viz.: in 1885 only 30 of nerve-stretching had been collected with 21 deaths—a mortality of 70 per cent., which is a decided improvement over that of amputation; but the cases are so few in number one must ask for more information before giving a decision unqualifiedly in favor of the procedure. We, however, know that nerve-stretching does cause a hyperæmia

which extends up and down the trunk to some considerable distance, and through that means may favorably influence the nutrition of even the spinal cord so as to inhibit the growth or extension of the morbid materials therein demonstrated.

The exploration and excision of painful cicatrices has been occasionally done; sometimes with the result of finding foreign bodies deeply embedded. The removal of such is rational: and probably the finding and removal of the knot of a whip-lash from inside a large nerve-trunk by Dupuytren has, more than anything else, drawn attention to the fact that in tetanus there is distinct involvement of the nervous system.

One other operative procedure deserves further trials, and that is the use of intravenous saline solutions. It seems rational to employ them first to wash or dilute the poisonous materials actually in the blood. Second, to salt the tissues so as to throw at least one more impediment into the onward march of the germs. Third, to add what may be to the already flagging strength of the patient.

Of other procedures mention only shall be made of venesection and leeching, of cupping and firing, of freezing and setons. Our opinion of them will, if measured by their success, be absolutely *nil*.

If, now, we take the demonstrations of to-day's pathologists, and look through the microscope with them, turn the centrifuge with them, and help them in their autopsies, we find our elders have amputated feet and hands which had in them few or none of the agents active in causing the disease; that they have stretched nerves which are only as the broken rails of a track along which the tiny passengers have long since been carried, with their baggage of toxines, to their chosen habitat in the central nervous system. This, then, explains the large mortality after these operations, and leaves us with new thoughts on the line of treatment; and you will all agree with me that the treatment of tetanus begins not with forcing open the already locked jaws, but with the little punctured wound in the hand, with the sore toe or heel, as the case may be. Clean out, clear out, cut out, disinfect and purify every punctured, contused, lacerated wound that comes to you. Do it thor-

oughly, not with a little cerate spread on the outside, but with a flood of antiseptic solutions into the very depths of the wound. Open it widely, keep it open, and only thus have you taken the first, chief steps in the operative treatment of tetanus. In test-tubes it seems as if the best solutions to use were carbolic acid and nitrate of silver; these act more powerfully upon the bacilli than does the corrosive sublimate. To tell the truth, 1 to 1000 of the latter antiseptic has been found not specially to influence the development of subsequent colonies of these tough little germs.

If, on the other hand, the case presents to you first the disease in full swing from lack of care in the beginning, or if the causative agents have eluded your antiseptics and have escaped to their elective home in the central nervous system, it remains to attack them there, and vigorously. Obviously, no extensive mechanico-operative procedures can be practiced upon these tissues. The destruction or removal of the largely diffused areas in which the diseased processes are found would be fatal to the individual. Consequently the treatment must be by means of remedial or other agents, to destroy or render harmless only the disease-producing agents demonstrated there. Of the remedial treatment this paper has not a word to say, except that nearly all remedies have been used, and all have failed to cure time and time again—a most horrible picture to look upon, much less to study.

There remains the use of serum therapy as studied in this disease by Kitasato, Tizzoni, Catani, Nicholaier, Borrel and Roux; and we have only to do with the particular methods of introducing it into the body of a tetanized patient. While we may not be in position to either adopt or reject *in toto* the serum treatment, yet with such a series of cases as that collected by W. E. Green, in which 25 out of 36 lived, and by R. F. Weir, in which 9 out of 11 lived (the combined mortality being 21 per cent., as against the 83 per cent. or more by other methods of treatment), we must certainly hope for far better results than by any of the older practices. The tetanus bacilli and poisons are occasionally found in the wound, occasionally in the muscles, occasionally in the blood, but always in developed

and fatal cases in the nerve-structures of the spinal cord, the medulla, and usually in the cerebrum. Therefore our medicines, serum or antiseptics, must reach these structures in order to cure the disease. Four methods of introducing the serum are known: First, by the mouth; second, subcutaneously; third, intravenously; fourth, directly upon the affected nerve-structures, the brain, and spinal cord. Of the first method, one can only say that digested serum would probably do less good than so much beef tea; and, besides, it is surely unadvisable to irritate the œsophagus by a single particle of anything except what is absolutely essential to the life of the patient, for every effort at swallowing causes the patient untold agony and definitely decreases his chances of recovery. The subcutaneous method is the one in general use, and is the most easy of application. The intravenous method seems more direct and quicker than the subcutaneous method; and it seems to possess the advantage over all other methods of a rapid diffusion of the serum to parts which may, so far, be not affected by the disease, and hence may limit its spread. The direct introduction of the serum into the body of the cerebrum is comparatively new, and more recent still is its introduction into the spinal cord. As matters of operative technique they are perfectly feasible, and if we can definitely locate the seat of most virulent infection or the extent of the infected area, they ought to be eminently successful. The cerebral injection is made by a long, slender hypodermic needle introduced through two symmetrical trephine openings, made under the most rigid aseptic precautions, thrust deeply into the antero-lateral aspects of the brain, and slowly injecting 4 to 6 c.c. The spinal injection is made by Quinche's puncture in the lower lumbar interspaces; part of the spinal fluid is allowed to escape to the extent of 20 or 30 c.c., and is replaced by the injection 10 to 15 c.c. of the serum.

The results obtained are, however, not yet altogether so highly favorable as to place the latter methods far ahead of the subcutaneous method. In fact, they should undoubtedly be reinforced by the latter method in every case. Tizzoni summarizes 114 cases of tetanus treated by serum in subcutaneous

methods, with a mortality of 61.3 per cent., which is much better than the 83 or more per cent. of older practices. Emory Lamphear, by personal investigation of recent cases, has found a mortality of only 52 per cent. under serum treatment in general, and of severe cases, in which the serum was given intracerebrally, a mortality of 59 per cent. in 22 cases. These figures lead us to hope that in the near future we may be able to still further reduce the mortality from this dread disease.

To the above general statements I have to add the history of two cases which have come under my own personal observation. The first, a boy of about 16 years, who had a finger-nail crushed and the finger bruised while playing ball. The wound was dressed with some care. He was given a well-selected homœopathic remedy, but in four days developed marked trismus; in another day I saw him with spasms severe and generalized, and inasmuch as the finger did not look well, it was removed at once and entirely. The boy was hearty in appearance; he had but little temperature: the amputation wound continued to look well throughout: he received the best selection of homœopathic remedies my colleague and I could make, a list including bell., gels., nux v., hypericum and arnica. The serum treatment subcutaneously was begun at once, and continued, so that he received large quantities of it in the next two days, when, in perfect consciousness, he had a seizure no more severe than hundreds of others, and died.

The second case was a younger boy, whose patriotism last Fourth of July sought vent in a toy pistol loaded with blank cartridges. The resulting wound was dressed at a city hospital, probably with the usual and ordinary care bestowed upon all such cases. He was brought, a couple of days later, to the dispensary of our Children's Homœopathic Hospital, where he was etherized, large openings were made on the palmar surface of his hand, and counter-openings on the dorsum; the wadding was removed, the curette was thoroughly used by Dr. Ward, in charge, to remove the powder-grains. The case was carefully dressed twice daily; was advised to remain in the hospital, but refused for 48 hours, then came with marked trismus. The wound was again cleansed; careful nourishment and protection

were afforded him; he was given nux v. internally. Orders were given to obtain serum, and after a short delay this was administered at 8 o'clock in the evening, and repeated at two-hour intervals till his death, at 3 o'clock in the morning.

I have no comment to make upon the preceding cases. The actual sight of their horrible course and their sad terminations would actuate me in each to give larger doses of serum, and to apply it more directly to the central nervous system; to the greatest care in nursing; to washing the blood; to the hypodermatic use of other remedies, especially carbolic acid, as recommended recently by Dr. H. C. Wood, Jr.; and to the very, very infrequent administration of the usual oral medication.

DISCUSSION.

Dr. B. W. James: I am very greatly interested in this very disease. I was unfortunate enough to crush one of my fingers when I was a little tot running around the house. I had some very strange and queer feelings for a considerable while. My finger was cauterized freely, and I was put on homœopathic treatment. I was in the office one day when a patient came in and said: "Is this the boy who had the tetanus?" "Yes." That is the first time I knew what was the matter with me. I recovered under homœopathic treatment, and I did not have any antiseptic measures applied. No doubt the parts were kept in a cleansed condition, and the only antiseptic remedy was the nitrate of silver.

I simply say that while this condition sometimes goes on to unfavorable symptoms, I think the mortality is not any greater under careful treatment—homœopathic treatment—than under the operation adopted at the present day.

Dr. L. W. Thompson: With regard to carbolic acid I would suggest that inasmuch as the solution of mercury allows the germs to grow around it, the former should be used to clean the wound in preference to bichloride. However, I would say that Dr. Goodno, in this city, has recently published an article in which he states that he has a mortality of only three and eight-tenths per cent. in thirty-four cases by using carbolic acid from something like four-hundredths to seven-tenths of a

gramme, hypodermically, in twenty-four hours. It is a great improvement over the serum treatment to get as small a mortality as that. The best under the serum treatment is thirty-six and some per cent.

I am very glad that the paper contains the statement, which is perfectly true, that each of the two cases I quoted received the best-selected homœopathic remedy, which was selected with care by my colleagues, and was given. I want to say that I have not mentioned, purposely, in the paper the protective injection of serum, because in the only case in which it was used it was totally unsuccessful.

I want to say, in reference to the last sentence in the paper, that in any case of tetanus coming under my care I shall be very careful to give just as little by the mouth as it is possible to use. After my experience of the last forty-eight hours I would never advise giving by the mouth, on account of severe convulsive seizures of the œsophagus.

WOUNDS OF THE ABDOMEN, WITH REPORT OF A CASE.

GUSTAVE A. VAN LENNEP., M.D., PHILADELPHIA.

In looking over the literature of penetrating wounds of the abdomen, I was struck with the dearth of articles pertaining strictly to this subject. A perusal of the "Index Med." for the last five years shows some forty pamphlets, the majority of which appeared in Indian journals that were not accessible. Of the remaining cases, a number were obtained somewhat similar to the one on which this paper is based. It is not my intention to take up your time with a discourse on the surgery of the gastro-intestinal system, but simply to report the following case, which, on account of its unusual features, may be of some interest to the members of this Society:

L. G., aged 10 years, was brought to the Hahnemann Hospital on July 7th, having fallen through a skylight some twenty

minutes before. When seen he was found to be in a condition of extreme shock, with almost continuous efforts at vomiting. On the right side of the abdomen, just inside the anterior superior spine of the ilium, was a wound about two inches in length, through which protruded the greater portion of the small intestines; at each effort to vomit, more coils would be forced out, until the opening had become choked and the extruded portion was partially strangulated. To cap the climax, the protruding mass was wrapped up in a piece of old blanket—the handiest object found by sympathizing friends—plentifully covered with dirt. The muscles of the upper thigh, anterior surface, and the soft tissues over Poupart's ligament, were badly torn, from which there was free hæmorrhage, the wound extending down to and just grazing the femoral vessels. It appeared as if a piece of glass had struck the upper part of the thigh, cut through the skin and muscles in an upward direction, and entered the belly obliquely. No fragments of glass were found in the wound. While hurried preparations were being made for operation, infusion was performed, a quart of normal saline solution being thrown into the left median basilic vein. This brought up the pulse at once, and ether was administered. The opening into the abdomen was so tight it was impossible to introduce the finger, or even to make out the extent of the wound by sight or feel. Accordingly, a straight incision was made along the linea semilunaris, as for an appendectomy, the finger introduced into the belly, brought out at the original wound, and the two cuts united. This gave us plenty of room for manipulation, and freed the gut from its strangulated condition. The latter, after being thoroughly douched with sterile saline solution and warmed up with hot towels, was carefully examined, and, no injury being discovered, was returned into the abdomen. The right half of the abdominal cavity was filled with blood-clots, hæmorrhage having come from divided vessels in the muscles of the walls; these were removed and the cavity washed out with a saline solution, allowing about a pint of the fluid to remain in the belly. The upper portion of the wound was closed with a continuous suture of catgut, layer by layer, leaving an open-

ing at the site of the original cut, through which iodoform gauze was packed into the abdominal cavity. The lacerated parts below Poupart's ligament were allowed to heal by granulation. Temperature at close of operation was 97.8°; pulse, 138. That evening the bowels were moved by an enema of glycerin and water, and next day his temperature was 99°; pulse, 104.

Five days later, the boy having run an uneventful course, he was again etherized, the gauze pack removed from the abdomen and the wound closed with a continuous catgut suture. It was impossible to approximate the fascia and muscle at the lower portion, on account of the extensive laceration of these structures; as a result, a weak spot is left in the scar, inviting the formation of a hernia, and necessitating the constant wearing of a flat, hard-rubber truss. He was discharged from the hospital on the twenty-third day. At the time of writing the wound has healed, he has gained some twelve pounds in flesh, and is enjoying excellent health.

A similar case is reported by Ross (*British Med. Journal*, April 24, 1897, p. 1024). The patient, a sailor, was stabbed in the abdomen, sustaining a wound in the region of the right rectus, severing the epigastric artery. Eighteen inches of intestine protruded, coated with sand and gravel; there was also a penetrating wound of the thorax over the heart. "This man within a month made a good recovery, without a rise of temperature or any untoward symptoms."

In a case reported by N. Caine (*British Med. Journal*, August 14, 1897, p. 400), there was a self-inflicted wound, nine inches long, done with a razor, extending from above the symphysis pubis to two inches above and to the right of the umbilicus; through this opening there protruded the stomach, omentum, transverse colon, and all the small intestines. These were uninjured, replaced, and the man discharged perfectly well at the end of eight weeks.

In Wyeth's case (*Med. News*, January 4, 1896) of extensive laceration of the abdomen by a bull's horn, the wound was on the left side, five inches long, extending from one inch above Poupart's ligament upward and backward, and through it pro-

truded about fifteen feet of intestine. Wyeth did not see the patient till nine hours after the accident, when he cleansed, replaced the gut, and closed the wound, using a gauze drain at the lower end. The man recovered, and at the end of two years after the operation was none the worse for his accident, with the exception of a small ventral hernia at the site of the drain.

What should be the management of a case of evisceration? Hæmorrhage, of course, is the first condition requiring immediate attention; fortunately, however, it is rarely fatal, the bleeding vessels contracting or being compressed in the opening by the extrusion of the gut or omentum, which takes place rapidly. The possibility of a hidden hæmorrhage into or within the abdomen, however, should always be borne in mind, and this was the alarming symptom in our case. It is advisable to replace the protruded viscera as soon as possible; if for any reason this procedure is delayed, they should be douched with hot saline solution and protected by hot towels, wrung out of a 1 to 10,000 solution of bichloride of mercury. As a rule, it is best to provide some drainage. Particularly is this necessary if there has been extensive soiling of the peritonæum. Either the wound should be packed with iodoform gauze, running into the intestinal coils in all directions, and a secondary suture practiced, or a small gauze or wick drain should be employed at one angle, to be removed two or three days after the operation, and renewed until the discharge, if there is any, ceases.

After an extensive laceration, the patient is better kept in bed three or four weeks, or until firm union has been established, and when allowed to get up should wear some support —a belt, or, preferably, a flat, hard-rubber pad protecting the scar, held in place by a spring.

The two causes of death consequent to such an injury are shock and peritonitis.

In the case reported above there is no doubt in my mind that the infusion performed at the time of the operation saved this boy's life, as his condition was such that there were grave fears of his dying on the table.

There were no symptoms in the after course to lead us to

believe that he suffered from any great degree of peritonitis, the bowels were moved readily with enemata, the pulse, while high immediately following the operation, gradually came down, and the temperature remained within a safe range. While not positive that the protruding intestines had been rendered perfectly aseptic before their replacement, we had enough confidence in the absorptive power of the peritonæum to feel that it would take care of any degree of infection that remained. Moreover, a septic peritonitis would hardly be looked for without a wound of the gut, and escape of fæcal matter among the intestinal coils.

The after-treatment was that usually following a laparotomy, with the exception that ice was kept on the abdomen continuously for the first 48 hours. Whether this had any bearing on his recovery I am not able to say; it seemed to give him considerable relief, and certainly produced no deleterious effect. It is the treatment usually followed at the Hahnemann Hospital.

DISCUSSION.

Dr. J. H. McClelland: A man came into the hospital with his intestines wrapped up in an old dirty piece of calico, much as described by Dr. Van Lennep in his case. Besides which there were two holes in his intestines, and that case recovered without any untoward symptoms.

Dr. B. W. James: A rare case of that kind occurred in my earlier days. A man was going along the street, and a tough came up to him and said something; he turned around and was stabbed below the umbilicus. I happened to be one of the nearest physicians, and I went into the drug store where he was. The small intestines all protruded from the abdomen, and there was an incision in the intestines about an inch and a half long which was sutured, and they were returned into the abdomen. An allopathic surgeon was called in; he got in just as we were all done and ready to sew up the wound. There was a considerable amount of hæmorrhage. He said, "Never mind the hæmorrhage, because the man will die anyway." So he took charge. He sutured the external wound; the case was sent home. He took a large quantity of aconite, and got well and practiced medicine several years after that.

SURGERY OF THE GALL-BLADDER AND BILE-DUCTS.

WILLIAM B. VAN LENNEP, A.M., M.D., PHILADELPHIA.

I PROPOSE to reverse the usual order of a medical or surgical essay and preface my remarks by narrating a few typical histories, selected from forty-odd operative cases that have come under my care. They are intended to illustrate the morbid conditions amenable to surgical intervention rather than medicinal or expectant treatment, and as such will serve for a text in a brief discussion of the surgery of the gall-bladder and bile-ducts.

CASE I.—Female; married; 48 years old; patient of Dr. Hughes, of Kennett Square.

History.—She suffered from persistent pain and tenderness in the region of the gall-bladder, where there was a vague sense of tumefaction, which was hard to distinguish from the muscular rigidity present. There had been no acute exacerbations or coincident jaundice, but she was the subject of a relapsing appendicitis, and some of the recurring attacks of pain might have been hepatic instead of appendicular colic.

Operation.—Through Langenbuch's incision an unprotected appendix full of pus was removed, and, on enlarging the wound to the rib-border, the gall-bladder was found packed full of calculi, and so contracted that it could not be drawn up into the wound. The ducts were empty. A hæmostat was applied to the gall-bladder to locate it subsequently, a protective gauze pack introduced, and the wound partly sutured.

Persistent vomiting followed the operation until the clip was removed, when it ceased. Free oozing of blood without apparent cause was also a troublesome symptom for several days. The opening of the gall-bladder was postponed for nearly two weeks, when seventy-four calculi were extracted; and, as the ducts were found to be patulous, this wound was closed and the

abdominal opening sutured around a small drain. There was no subsequent leakage of bile.

Diagnosis.—Chronic, calculous cholecystitis, associated with relapsing appendicitis.

Case II.—Female; married; 42 years old; patient of Dr. Conover's, of Fort Washington.

History.—She was suddenly taken, two days previously, with acute pain below the right rib-border, associated with exquisite tenderness, rapid pulse, temperature rise and abdominal distention, which was not relieved by enemata or purgatives. She was moderately jaundiced.

Operation.—A vertical incision showed a tense, fluctuating gall-bladder partially buried in old and recent adhesions, outside of which was a quantity of serous effusion. After a thorough toilet and isolation, the gall-bladder was surrounded by an iodoform gauze pack. Four days later some eight to ten ounces of dark, thin fluid and pus were evacuated, and three gall-stones teased out of the cystic duct. The mural and visceral wounds were sutured around a drain, and the fistula rapidly healed.

Diagnosis.—Empyema of the gall-bladder from cystic duct obstruction; ancient and recent fibrinous, followed by serous peritonitis.

Case III.—Female; multipara; 47 years old; treated in the surgical wards of Hahnemann Hospital.

History.—For some time the patient had noticed a tumor on the right side of the abdomen, on a level with and extending a little above the umbilicus. This tumor was constantly tender, and gradually increased in size during successive attacks of colic and digestive derangement without jaundice. Thirty-six hours before admission an attack came on, more severe than any previous one, associated with temperature and pulse rise, constipation, vomiting and distention. The patient was sent to the hospital with the diagnosis of an appendiceal abscess and consequent peritonitis. The system certainly seemed to warrant the conclusion arrived at, as such an abscess could readily result from a leaking, upturned appendix. Fortunately a careful study with the class, during clinic, of the history, the

clean-cut tumor and its location, together with the recognition under ether of its continuity with the rib-border rather than the caput coli, enabled us to make out the condition. The beginning peritonitis, presumably septic, called, however, for immediate intervention in any case.

Operation.—A vertical incision was made over the most prominent part of the tumor, which proved to be the gall-bladder imbedded in a mass of grayish-yellow, fibrino-purulent exudate, together with some old and firm adhesions. The abdomen contained a quantity of turbid fluid, the diffuse infection evidently coming from the unprotected, distal end of the sac. With the aid of mops, after a thorough peritoneal toilet, the gall-bladder was drawn out of the wound and fully one-half of it, which was gangrenous, resected. A pint or more of fetid pus and bile-stained mucus was evacuated, together with several hundred gall-stones, some of which were impacted in the cystic duct. The common duct was free. Bile began to discharge from the opening at the end of four days, and the wound healed promptly, partly by granulation and partly after a secondary suture.

Diagnosis.—Gangrenous cholecystitis of calculous origin; sero-purulent, fibrino-purulent and ancient fibrino-plastic peritonitis.

Case IV.—Female; 43 years old; patient of Dr. Webster's, of Media.

History.—She had suffered for some time from recurring appendicitis, the attacks increasing in frequency and severity. Below the rib-border was a tumor which had been diagnosed as movable kidney. It slipped back into the loin just as the kidney does, and pressure produced the same sickening sensation. Its shape, the evident fluctuation and its continuity with the liver, however, decided us that we had a distended gall-bladder to deal with.

Operation.—The diseased appendix was removed through an incision in the right semilunar line, and the large, tense gall-bladder drawn into the upper angle of the wound and held in place by a protective pack, the lower portion being sutured. No calculi could be felt in the ducts. A week later about a

pint of bile-stained mucus was evacuated. Fearing a cicatricial obstruction, as the probe would not go through the cystic duct, I sutured the mucous membrane to the skin, expecting a mucous fistula to result. A few days later bile began to discharge freely from the opening. The fistula ultimately healed with the aid of the actual cautery, and, while the gall-bladder swelled up and became tender some two years later, this disappeared without any special treatment. The attachment of the gall-bladder in the abdominal wound will give easy access to it in case of troublesome recurrence.

Diagnosis.—Hydrops of the gall-bladder from duct catarrh.

Case V.—Male; 60 years old; seen with Dr. Pratt, of Coatesville, and Dr. W. C. Goodno, the medical consultant.

History.—For years he had suffered from recurring attacks of gall-stone colic associated with jaundice and the characteristic stools and urine. The overshadowing symptoms, at least early in the case, must have been the typical chill, fever and sweat, for he had been treated by previous attendants for malaria with large doses of quinine, etc.

Operation was undertaken as the sweat subsided after a febrile rise to nearly 106°. There was rigidity and tenderness below and inside the rib-border, the pain running characteristically toward the umbilicus. The gall-bladder was considerably distended with thick mucus and a large gall-stone was impacted in the cystic at its junction with the common duct. The end of what might be termed a pipe-shaped calculus projected into the joining hepatic and common ducts. The opening into the cystic duct for the removal of stone was successfully sutured, no gross signs of pus being noticeable.

Fearing a too rapid flow of bile through the now enormous cystic duct, I packed this and the gall-bladder very tightly with iodoform gauze. The seat of operation was protected with the same material and the wound left open. Three days later I was summoned in haste on account of another tremendous chill, followed by a temperature of 105°, and an alarming, colliquative sweat with a miserable pulse of 140. On removing the intracystic gauze an enormous gush of bile poured out, since which time there has been no recurrence of the phe-

nomena. The wound healed by granulation, bile in the stools being variable and mostly absent until the fistula closed with the aid of the Paquelin cautery. The slight digestive disturbances, while the fistula discharged all the bile, yielded readily to the administration of ox-gall. The absence of bile did not seem to affect the odor or the consistency of the stools.

Diagnosis.—Catarrhal cholecystitis from obstruction of the cystic duct; gall-stone in latter acting like a ball-valve in the common duct by projecting into its lumen; long period of chill, fever and sweat seizures.

Case VI.—Female; married; 59 years old; seen with Dr. Black, of Downingtown, and Dr. O. S. Haines, the medical consultant.

History.—The patient had suffered from biliary colics for years, these seizures being associated previously with deep but intermittent jaundice. After an unusually severe and long-lasting attack, she passed a number of gall-stones, and, since noted, at times, considerable pure bile in the stools. She was never free from pain, tenderness and rigidity below and inside the rib-border, but the recurrences were not associated with jaundice, only a little bile being noticed in the urine.

Operation.—The oblique incision showed a thickened, contracted, intimately adherent, empty gall-bladder with a movable calculus in the common duct. The stone was removed after the stitches had been applied to close the prospective wound in the duct. The gall-bladder was found to connect by a minute opening with the transverse colon. After excising the former, this fistula and the cystic duct were closed by inversion and suture. The abdominal wound was sewed up ten days later. No leakage of bile took place.

Diagnosis.—Cholecystic lithiasis: discharge into colon by ulceration; ball-valve calculus in common duct.

Case VII.—Female; multipara; about 65 years old; seen with Dr. Van Baun.

History.—She had gradually developed jaundice, associated with emaciation and cachexia, until the pigmentation was of the deepest imaginable hue. Through the thin abdominal wall the much distended gall-bladder could be seen as well as

felt. A tumor was distinctly made out in the region of the pylorus, which was presumed to be behind the stomach (pancreatic) in the absence of gastric obstruction, the presence of tympany over it, etc.

Operation.—A quick cholecystotomy was undertaken, and as her condition would not warrant an anastomosis with the intestine, a biliary fistula was formed. This discharged freely until her death, but the jaundice was only slightly improved. The obstruction was due to a carcinoma originating in the head of the pancreas and matting together the stomach, duodenum, biliary duct, etc., in an inseparable mass.

Diagnosis.—Obstructive jaundice from cancerous involvement of common duct.

Case VIII.—Young adult male; operated in the clinic of Hahnemann College.

History.—The patient had received a blow in the epigastrium, which was followed by the symptoms of a localized peritonitis. Within the preceding few months jaundice had appeared, which was progressive and continuous. No tumor could be felt, but the gall-bladder was distended and readily recognized. The patient was rapidly emaciating, and reminded one strongly of the conditions found in the preceding case, *i.e.*, malignant common duct obstruction.

Operation.—Section showed the common duct buried in dense fibrinous adhesions. The gall-bladder contained several ounces of thin fluid, and after carefully separating the adhesions, water could be forced through the common from the cystic duct. The fistula and abdominal wound were therefore left open. As it soon appeared that no bile entered the intestine a cholecystenterostomy was done with the upper jejunum, the abdominal wound being sutured secondarily. The jaundice disappeared entirely.

Diagnosis.—Obstructive jaundice from cicatricial contraction outside of the common duct.

Case I. is narrated first, as illustrating the simplest if not the most frequent pathological condition calling for surgical intervention. It is not at all unusual for a gall-bladder packed full of calculi, small or large, single or multiple, to be carried

about for years without the slightest discomfort, the first intimation of the condition being found on the post-mortem table. The tendency, however, of such foreign bodies is to cause irritation, or. in other words, a catarrh: but it is equally true that the latter predisposes to or even induces the formation of gall-stones. Furthermore, unlike pure bile, to which have been attributed antiseptic qualities, this catarrhal accumulation furnishes an excellent soil for germ growth, and in consequence the conditions requisite for inflammatory progress are complete. Thus we find in the natural history of cholecystic concretions chronic mural inflammation with its inevitable contraction, producing the small cicatricial gall-bladder, upon which may supervene a more acute process, as in the case narrated. Some of the other cases illustrate the intra- and extra-vesical infections, as well as the varieties of peritonitis which sooner or later are produced by irritating gall-stones.

While such an accumulation of calculi may work out in the ordinary way, with the consequent colics, or, if of large size, may make for themselves other avenues of escape, it should be borne in mind that the thick, ropy mucus of gall-bladder catarrh may produce seizures which differ but slightly from those accompanying the extrusion of a stone. In fact, the only difference is one of degree and duration, and hence cannot be distinguished from a rapidly-progressing calculus of comparatively small size. I have in a number of instances been able to bring about a complete cure of such catarrhal attacks by draining and washing out the ducts, whether calculi were present or not.

It may not be out of place here to insist on the careful running-water and sieve examinations of all the stools in cases of presumable cholelithic seizures, and the occasional deceptive results of the sweet-oil treatment. Yet, in this case the discovery of gall-stones in the stools was not a necessary preliminary to operation, the indications being the persistent pain and tenderness, without distinct tumefaction and in the presumable absence of hepatic colic. The long-continued vomiting after operation was undoubtedly reflex in character, as it ceased immediately after the removal of the hæmostat. Such a cause

is worth bearing in mind after abdominal as well as other operations, especially those about the rectum, vagina, and male bladder and urethra. The worst case of the kind I have ever seen was apparently caused by the vaginal gauze pack after a simple trachelorrhaphy, and the patient described a similar experience after a previous operation of the same kind.

Another symptom was the long-lasting parenchymatous oozing, the hæmostasis being complete as regards spurting vessels and no bleeding points being found in the subsequent dressings. We are taught to look for troublesome hæmorrhage from the aplastic condition of the blood produced by profound cholæmia, but the patient was not jaundiced in the least. On the other hand, I have feared this complication in a number of cases operated on for hepatic or common-duct obstruction from catarrh, stricture, cancer or stone, with the deepest jaundice, but have never met with undue oozing except in this instance.

In Cases II. and III. the inflammatory process had gone a step farther, the catarrhal accumulation having become infected and transformed into pus. This infection may come through the circulation or up the ducts from the intestine, stagnation appearing to be a strong predisposing factor, as shown by experiments on the lower animals and as found during operation or autopsy. Of the micro-organisms the omnipresent common colon bacillus plays here, as elsewhere in the digestive tract, its harmless as well as its deadly rôle. The staphylococci, and the streptococci, too, have been demonstrated with varying constancy, and the typhoid bacillus is present in the gall-bladder, with few exceptions, during and after an attack of enteric fever. The latter seem to act in this reservoir as in the post-typhoid, periosteal abscesses of the long bones—inducing, intensifying or reproducing gall-bladder inflammations, immediate or remote.

In these operations there in an anatomical element of safety in what has been variously termed the right renal pouch or the subhepatic space. Bounded, as it is, by the liver above, the duodenum and stomach internally, the hepatic flexure in front, the kidney and spine behind, it is walled off from the general

peritoneal cavity sufficiently to at least delay the spread of infections. Lined, as it is, by the ascending layer of the mesocolon covering the duodenum and the kidney, and the peritonæum over the liver and spine, its natural outlet is into and down the lateral gutter to the iliac fossa, or even to the pelvis. It is well known that appendiceal extravasations on the outer side of the cæcum are far safer than those coming from the organ when pointing inward, inward and upward, or even inward and downward. This space or pouch is said to hold a pint or more of fluid before it will overflow, and, taking advantage of this, some operators go so far as to dispense with toilet, pack or drainage; others simply introduce a glass tube anteriorly, and still others rely upon a stab-opening in the right loin. In the presence of normal bile such liberties are permissible, as I found in a case of gunshot-wound of the gall-bladder operated at the Hahnemann Hospital, in which there was an enormous extravasation, without peritonitis, after anterior drainage alone. So, too, in a case of tightly-contracted gall-bladder on a small stone, seen with Dr. Haines, in which it was impossible to do a cholecystectomy on account of firm adhesions, I isolated the space more completely by walling-off the general peritoneal cavity with iodoform gauze, and allowed the bile to pour out from the deeply-situated gall-bladder through and around a rubber drain. It is a different thing when we have to deal with infected ducts and gall-bladder, and here the toilet and protection must be careful and complete, in spite of this anatomical side-track, or diffuse peritonitis will result.

Before leaving the question of the subhepatic space, reference should be made to the immunity of these patients from subsequent ventral hernia. This is true of all subdiaphragmatic operations in contrast with the supra-pubic or supra-inguinal incisions, and permits of imperfect or late suturing, or even of healing by granulation. There is a limit, however, even here, and the attempt should always be made to get at least a fair amount of closure.

The sagging of the abdominal contents from gravity also suggests a valuable aid in operating high up—the reversed Trendelenberg position or a sand-bag under the liver aiding

materially, particularly when access is desired to the common or hepatic ducts.

The removal of the gall-stones cleared the cystic duct in both of these cases, so that when the catarrh yielded to drainage —this, undoubtedly, being responsible for the moderate jaundice in Case II.—the bile resumed its normal course and the fistula healed. Such a clearing of the ducts is by no means always possible, nor does the catarrh invariably yield as promptly; for example, Case V., where there was no bile in the stools for weeks. Again, I have seen cases in which the condition of the patient precluded anything more than simple evacuation—the removal of the obstruction being undertaken later on. In one case of empyema operated for Dr. Marsden, I found the cystic duct occluded, presumably by stricture following ulceration, as no calculi were present. Such ulceration is usually due to gall-stones, and the rare instances of stricture develop after their expulsion. Cholecystectomy was not deemed advisable, and the patient has to this day, in consequence, a minute mucous fistula. He persists in wearing a small rubber drainage-tube, and refuses to have any operation undertaken, as the annoyance is but slight.

While these empyemata are comparatively common, the hyperacute, phlegmonous or gangrenous variety is quite rare, Case III. being the only one I have met with. The symptoms closely resemble those of the acute appendiceal lesions, in that septic peritonitis is soon produced and operation is urgently demanded. The points of difference are the tumor, its location, and the somewhat slower course, for the anatomical reasons already given. Like other acute peritoneal infections, some of these cases have been operated for supposed bowel obstruction, but, fortunately, both conditions demand the same remedy. As elsewhere in the intestinal tract, perforation is not necessary for the escape of micro-organisms, mural inflammation or necrosis opening the door, only not as widely. If, instead of a diffuse peritonitis, adhesions are able successfully to limit the process, an encysted abscess results, and this usually follows the remains of the umbilical vein, and discharges at the navel, where I have evacuated calculi, or it may empty into one of the hollow organs—duodenum, jejunum, colon, stomach, etc.

This took place in Case VI., and I have met with one subphrenic abscess originating in this manner.

The cause of the hydrops in Case IV. is somewhat in doubt, as it might have been due to displacement and kinking of the cystic duct, the organ resuming its normal position and straightening out the duct when empty. Besides, the gall-bladder was unusually movable and could readily be pushed into the loin, out of reach. Such displacement is not infrequently produced by tight clothing or an overloaded colon; but if this was the case, the gall-bladder would have emptied itself from time to time and the tumor would in consequence have been intermittent. The previous irregular emptying of the gall-bladder in the manner mentioned is one of the prolific causes of cystic and duct catarrh.

I have seen this same condition associated with a movable kidney in a patient of Dr. Grigsby's, both organs being recognized before operation; but the hydrops was considered the more important, and an anterior incision accordingly made. No obstruction was found, and the bile began to flow at once. As the tumor had been intermittent, it is more than likely that this was an instance of malposition and kinking. Nephrorrhaphy was subsequently necessary.

Again, this patient was suffering from a coincident, relapsing appendicitis, and I have purposely selected this one as well as Case I., in which a similar condition existed; to these I could add other like observations. Movable kidney on the right side has frequently been found associated with appendiceal inflammation; the relationship has been declared a causative one, and due to pressure on the superior mesenteric vein. But as regards the gall-bladder I know of no similar reports, nor of any attempted explanations. I am at a loss whether to attribute it to a coincidence; to the effect of the digestive disturbances from bile-duct or reservoir trouble; to the grippe epidemics which are claimed by some to have lowered the tone of the appendix, and by others to be responsible for diseases of the biliary passages; or to a preceding typhoid, already referred to and noted in some of my cases, to which appendiceal disease appears to bear at times a *post hoc*, if not a *propter hoc* relationship.

Case V. presented the picture we are wont to find in ball-valve, common-duct calculus; intermittent jaundice; chills, fever and sweat; pain running toward the umbilicus, tenderness below and inside the 9th costal-tip, etc. I have met with several instances in which the mistake has been made of treating these ague fits as malaria. I was surprised, however, on opening the abdomen, to find the gall-bladder distended, and it was not until a cystic-duct stone was seen to act as a movable common-duct one, that the condition was explained. It has been said that the antecedent cholecystitis has so impaired the distensibility of the gall-bladder that it is almost always contracted in the presence of a ball-valve common-duct calculus, while it is more or less distended in cystic-duct obstructions. This I have invariably found to be true.

There was undoubtedly present an infective cholangitis, the commonest cause of which is just such a stone, but the process had evidently not gone on to suppuration, as there were no gross evidences of pus, nor the common results, enlargement of the liver and hepatic abscess. Drainage by the way of the gall-bladder is pre-eminently the remedy, and the more likely to be successful the earlier in the pathological process it is instituted. The gauze pack demonstrated admirably that the obstructing stone was the cause of the ague fits, as it evidently retained the bile and reproduced the chill, fever and sweat, of which there was no recurrence after its removal.

In Case VI. there was the typical ball-valve stone situated in the ideal position for removal, the central portion, not at the beginning of the duct, nor in the ampulla of Vater, as often happens. The jaundice was relieved by the opening into the colon, and this is an example of Nature's cure in calculi too large to enter or pass the ducts. The pathological steps are, cystic catarrh, mural inflammation, adhesive peritonitis, attachment to a neighboring organ, ulceration or pressure-necrosis, fistula and discharge. It is unusual for the stone to escape into the colon, but when it does so it goes through the capacious intestine, and is passed without causing any trouble. More frequently it enters the duodenum or jejunum, which suggests the ideal location for cholecystenterostomy. These are the calculi which produce bowel obstruction, and I have

met with one which was arrested just above the ileo-cæcal valve, another at about the location of Meckel's diverticulum, while a third in the ileum was the pivot for a large volvulus.

As a rule, such a working out of calculi from the gall-bladder takes place without causing any disturbance, but in this instance their escape was coincident with a severe accession of localized inflammation. The subsequent course was characteristic of a movable common-duct stone, with the exception of the jaundice, for which the minute opening into the colon acted as a safety-valve. Cicatricial contraction would, beyond a doubt, have soon closed this route of exit.

While we are taught to look upon the complexus of symptoms given above as almost pathognomonic of ball-valve common-duct stone, I have cited Case V. to show how one in the cystic duct can produce the same symptoms, with the exception of the enlarged gall-bladder, and this is easily overlooked, particularly in the corpulent. Even more complete was the deception in a case of stone of the hepatic duct operated for Dr. Closson—the seizures, the intermittent jaundice, the ague fits, and the small gall-bladder—the deciding symptom being the high and deep tenderness. Section showed eleven freely movable calculi in the hepatic duct.

In Cases VII. and VIII. we find the condition similar in many respects, but widely at variance in its causation and effects; common-duct obstruction, continuous and intensifying jaundice, and progressive emaciation or cachexia. In both the gall-bladder was distinctly enlarged, which, with the deepening icterus, is strongly suggestive of malignant disease, as distinguished from calculous obstruction where, as stated above, the jaundice is associated with a contracted gall-bladder. The distended ducts and gall-bladder contained a colorless mucus, for in complete common-duct obstructions the outflow of bile is arrested or reversed on account of the low excretory pressure, and this also explains the fact that the cystic enlargement does not progress beyond a certain point. Here, however, the resemblance ceased, for the woman was of the cancer age and presented a tumor, the recognition of which in this location usually means that it is inoperable. In spite of this, with due consideration of the risk of any oper-

ation in such patients, cholecystostomy or cholecystenterostomy is not only justifiable, but even advisable, to relieve the cholæmia and to cure the catarrh induced at times by the incurable lesion. In fact this catarrh is often responsible for the jaundice, as it must have been in this instance, and prolonged drainage and washing may so clear the ducts that the bile will resume its normal channel. In similar cases I have observed the coincidence of long-standing gall-stone, the irritation of which it has been claimed predisposes to, if it does not induce, cancer. So, too, this was the only instance of the kind in which I have found no bile-stained fluid in the abdomen, although this probably depends entirely on portal pressure and stasis.

Case VIII., on the other hand, was a much younger subject, and gave a distinct history of traumatism and localized peritonitis. It is in the latter respect unique, so far as I know, although inflammatory adhesions of calculous origin often cause cholelithic seizures and call for operative relief. In a similar obscure case, in which I made an exploratory section, the glands about the common duct were tubercular and caused a like obstruction. Incision and curettage were followed by an apparently permanent cure.

In conclusion, let me say to my medical colleagues that surgery offers relief in many conditions of the gall-bladder and bile-ducts hitherto unsuccessfully or erroneously treated or resulting fatally. From the cases cited it will be seen that operation is indicated in calculous cholecystitis; in hydrops, empyema and phlegmon of the gall-bladder; that is to say, in recurring colics, with or without gall-stones in the stools; in persistent pain and tenderness in this region; and even in continued cholecystic enlargements without other symptoms; in peritoneal infections from this source or for the relief of adhesions causing distress or obstruction; in abscesses about the gall-bladder and ducts and in or about the liver; in short, subsupra-and intra-hepatic suppuration; in the prolonged presence of jaundice, whether with cholelithic seizures and contracted gall-bladder, suggesting common-duct stone, or with enlarged gall-bladder pointing to malignant obstruction; in unyielding catarrhal and in infective or suppurative cholangitis; in fistula, whether mucous or biliary; and, finally, in wounds and rupture of the gall-bladder.

REPORT OF THE SECTION OF SANITARY SCIENCE.

Hahnemann as a Sanitarian, by A. P. Bowie, M.D.
The Sanitary Use of Water, by Silas Griffith, M.D.
Coast and Mountain Climates Compared, by Bushrod W. James, M.D.
The Care of "The House Beautiful," by Trimble Pratt, M.D.

HAHNEMANN AS A SANITARIAN.

A. P. BOWIE, M.D.

The world at large and the medical profession in particular know of the discoveries of Samuel Hahnemann, and of him being the founder of a system of medicine that placed the healing art on a scientific basis; and, while there is the same opposition and denunciation of his doctrines to-day, his followers are glad to see the influence his teaching has had on traditional medicine and the adoption in part of his measures for the cure of the sick, and sincerely hope that all will become true homœopaths in the near future. But we must set them the example, and follow the teachings of Hahnemann in their purity and simplicity.

But while Hahnemann the physician is well known, Hahnemann the sanitarian is not as familiar as he should be, and his followers should study his writings and teachings on this subject before they can become the success that he was. It seems to me that the earlier homœopaths were more consistent, and likewise more successful, by putting in practice the hygienic and dietetic measures recommended by the master.

Bache, in his "Therapeutics," truly says that the success of our treatment depends upon the advice we give in such matters.

In the lesser writings of Hahnemann are many lessons on health and hygiene; and, while they were written before the *Organon* was given to the world, they show that Hahnemann at that time was one of the foremost sanitarians of the day, and

the various essays contained in the "Friend of Health" are well worth reading for the lessons they contain, even if they were of a popular character, for must not all our advice on such subjects be comprehensible to the public, whose servants we are?

It would be well for all of us to read his essays "On Protection Against Infection in Epidemic Disease"—where cleanliness, or, to use our modern term, asepsis, was recommended, and never antisepsis. The components of the various antiseptics are such virulent poisons that even the minute quantities required should make a homœopath hesitate to use them.

"The Prevention of Epidemics in Towns" and "Things that Spoil the Air" attest to his close observation and sound advice on matters pertaining to the preservation of health. One part of this work I quote entire, as it contains a lesson we all should heed, and which even now it is very hard to get our patients to believe, although the truth of this advice is acknowledged by us all.

"An occasional purgative—surely that can do no harm."

My Dear Doctor.—I have been advised to apply to you, as you have the character of always telling people in a pretty straightforward manner what they ought to do. It occurs to me, and my family surgeon also has often reminded me—that it is surely time for me, my wife and my children, to take a good dose of purgative physic. "Your Honor," he is always saying "only think what a quantity of dirt must accumulate in the abdomen in the course of half a year if the refuse be not swept out and cleansed away at least once a month." The like of us, to be sure, do not understand it; but one would think, that of all the food and drink we take, somewhat must occasionally stick in the body, though it may not be so desperately bad as my surgeon alleges.

Thinks I to myself, if everything collects in the body in that way, then my shepherd, who is in his seventieth year, and has never taken any medicine in his life, must carry about with him in his body enough to fill a barrel. But my surgeon ought to know more about this matter than I do. The fellow has, as he assures me, had great experience during the Seven Years' War;

he has amputated a fearful number of arms and legs in the military hospital, and helped to extract many bits of broken skulls. Do not blame me, doctor, for adopting his views; the chap makes an impression on one with his talk. He looks as fierce as a savage, stammers out horrible Greek and Latin words, gesticulates with his arms, and distorts his features to such an extent that one cannot help being moved when one listens to him. And what he says may be perfectly correct; and is there any greater blessing than health?

What a lot of diseases with Greek and Latin names one might get in one's gullet by neglecting the proper precautions! My wife and children are very precious to me; they are all lively and ruddy, and as sound as a nut. May God keep them so! But all my household must lend a hand and work according to their abilities. After being in the open air they get a brave appetite for their meals. None of them ail in the least, that is true. If we could but prevent their suffering hereafter!

If you should think a good purgative advisable for us, please send us our portions, and say how we should take them. The chemist will tell you the ages of myself and family. You may send the stuff to us by the bearer's car.

I am yours,

W. Van Teutar,

Retired Captain.

Schloss, Berghausen, 1st Oct.

Answer.

My Dear Captain.—It is well that you have not given the preference to the idle talk of your Brennerbus of a surgeon over your sound judgment, as so many in your situation do.

You appear to appreciate the truth of that very sensible maxim, "The whole need not the physician but they that are sick." Who would take medicine if there was nothing the matter with him? Is there any better prevention of disease than a good robust state of health? That you enjoy, I perceive from your letter, along with your family. Do you wish for anything better?

It is only in cases of excessive overloading of the stomach in

delicate persons, and such as are affected with chronic diseases, that the circumstance occurs of nature being too weak to expel the ichor at the right time and we require to assist her by means of a purgative medicine. But in the healthy state, nature is able herself to evacuate the useless refuse of the food, and that infinitely better than can be done by our good art. Therefore, trust me, take no physic, neither you nor your family. Anything else you ask I shall be happy to inform you of.

Let your barber-surgeon stick to your beard; the inferior class of these gentry usually only understand the art of making healthy people less healthy, and the sick worse than they were; they bring nothing out of the military hospital but disregard for the sufferings of others. Farewell.

What better mode than this can be furnished the physician in dealing with the art of preserving health?

Sanitation in its broadest sense includes everything that tends to conserve and preserve health, and preferably no drugs should be employed for this purpose.

In the *Organon* of the healing art, and also in the Chronic Diseases, full directions are given to remove whatever exists in the environment of our patients, and then we can pave the way to a cure; for, to quote from Section 4 of the *Organon:*

"He is at the same time the preserver of health when he knows the causes that disturb health, that produce and maintain disease, and when he knows how to remove them from healthy persons. When every physician becomes a sanitarian and every house a sanitarium, then diseases will be few and the highest art of the physician will be manifest."

Let us speed the day when this will be true.

THE SANITARY USE OF WATER.

SILAS GRIFFITH, M.D., PHILADELPHIA.

Water, as found in Nature. Sparkling in the diamond dew-drop; flowing from the fountain as clear as crystal; rolling in the mighty ocean waves; rising in gentle vapors from the earth and sea up to the cloud-regions, there to be distilled, condensed and aërated, ready to be distributed to the earth again in form of rain.

Cloud Water is pure, natural water, and because of its purity is a ready absorbent; it becomes contaminated as it falls in rain, especially in the beginning, for it becomes partially charged with impurities from the atmosphere, even before it reaches the earth.

Pure Water is the most essential requisite in the way of nourishment that can enter the human system. About 90 per cent. of our food supply is, in fact, only water. All drinking-water which is at all doubtful should be subjected to *chemical analysis* and to *microscopical examination*, but the only *absolute* test is the *physiological test.*

Spring Water.—Spring water is only as good as the source from which it comes. It percolates through sand; but at the same time it frequently takes up mineral substances, especially carbonate of lime, which cannot be digested nor assimilated by the vital organs of the body. Therefore, when it gets into the blood by weak action of the kidneys it incrustates in the joints, muscles and nerves, and causes rheumatism and premature old age.

Slow Sand Filtration for the Water Supply of Large Cities.—On a large scale the slow sand-filtration process is the most effective plan of purifying water, in the absence of distillation. In slow sand filtration the bacteria are removed by an organic, slimy pellicle which forms on the surface of the sand under the water. After a few days or weeks the pellicle becomes so

thick as to clog the flow, and the surface of the sand must be scraped off and a new surface exposed. This process removes bacteria almost entirely, but it does not remove mineral impurities nor sewage; this latter, however, is partially burned up by the oxygen contained in the water, while in distilled water the oxygen is entirely driven off and must be replaced artificially, but the mineral impurities by distillation are left behind in the still to be thrown away, and are thus entirely removed.

Boiled Water.—In the process of boiling water the oxygen escapes and the dregs remain, although it does destroy germs; filthy water supply should not be tolerated.

Filtered Water.—Individual domestic filters of the most approved kind are often of decided benefit for clearing water for special purposes, but in the present state of sanitary science the best are not considered continuously germ-proof.

Distilled Water.—Water to be distilled by a new-process water-still is placed in the retort or boiler, and as steam is generated it separates from the dregs, which are left in the boiler, and the pure steam is condensed and becomes water again. A very important part of the process is re-oxygenating it with pure air, in order to make it a perfect drinking-water. It is perfectly free from all germs.

The Alum Treatment.

For Treating the Water Supply of Large Cities.—A method of filtering impure water much advocated now by interested parties is the alum process. In this a solution of alum is mixed with the water, which by acting on the lime and other matter is decomposed and makes a light flocculent precipitate which requires a long time to settle, and in doing so tangles up the bacteria and other impurities, and afterwards, when forced through a bed of sand, leaves these impurities behind. This is a more rapid process than that of sand filtration, and if it were possible to exactly apply and distribute the precise quantity of alum requisite, it might be reasonably safe, although even then slight traces of this extremely deleterious substance would be likely to remain.

But, as a matter of fact, this exact supply and distribution

cannot be secured, because the amount of lime and other salts and bacteria *vary in the same day*, and even from *hour to hour*. So that the quantity of alum will either be insufficient to remove all the impurities from every portion of the water, and an absolutely equal distribution of the alum cannot be secured, so that the bacteria will come through freely, or else an excess of alum will have to be used, and that will appear in the filtered water, and if used for drinking habitually and constantly, serious *impairment of health* will result. It is said that fish will not live in water so treated.

As such waters are not only unsanitary, but also extremely destructive to steam boilers, it is to be hoped that the medical as well as the engineering profession may take cognizance of this proposed plan for the employment of these patented devices, and insist upon *Slow Sand Filtration*, which is now almost universally in use in the great cities of the world, and has been thoroughly tested by more than fifty years' practical experience.

Artesian Well Water.—Many persons think artesian well water is the purest, but this is often a great mistake. It is also a common notion that a *deep* well or a *bored* well is an *artesian* well, while *shallow* wells or *dug* wells are not; but this is also a mistake.

An artesian well is one which is carried down through an impermeable stratum of clay or rock, which thus forms a *water-tight roof* over the source of supply. This may be 50 feet or 3000 feet; it is an artesian well, all the same. This impermeable roof slopes off to higher ground in one direction or another, often for hundreds of miles, and finally reaches the surface. The rainfall gets under the roof, which may be sandy beneath and resting upon another water-tight stratum, and so fills this space; and when a well is bored down the water rises and frequently overflows; but the water is liable to be charged with impurities and gases, especially under strong pressure down below, while the source of supply itself may be only a few miles away, where the stratum dips rapidly, and these impurities thus run down these channels and taint the water. Frequently, when such a well is started, even of a very good quality of water, the continuous flow for a few

months or years will gradually bring down mineral contamination or other impurities, and the quality of the water will rapidly deteriorate. These wells are often carried through several strata before a good supply is reached.

Living springs, so called, are usually in character somewhat similar, breaking through strata at the foot of a hill. A few years ago a *mountain valley in Switzerland* was infected with typhoid fever. Shortly afterward this disease appeared with great virulence in another valley many miles away, and totally out of communication with the other. The inhabitants procured their drinking-water from a splendid spring in the neighborhood, while the other valley was drained by a creek which disappeared in the mountain. Investigations made by the government resulted in showing that a saline solution, when poured into the creek in the one valley, appeared in a day or two in the spring water of the other; but the filtration between was so perfect that solutions of boiled starch poured into the creek where it disappeared could not be detected by the iodine test in the water of the spring; and yet the typhoid bacilli obviously went through freely. This may be the case also with the water of artesian wells.

The only absolute test for the purity of the water is the physiological one, for the most brilliant and transparent waters are often the most dangerous. The typhoid bacillus has never been detected in ordinary running water, and the same is true of other pathogenic bacteria. When water is known to be unwholesome or grossly polluted, the source of supply should be changed. Slow sand filtration for large cities is a guarantee to some extent against accidental or sporadic infection.

Conclusion.—Taking the case of sanitary water service, then, in its broadest aspects, it may be said that domestic filters are frequently useful in a limited sense only, and for temporary use.

That *artesian* water or *spring* water varies with the source of supply.

That *creeks* or *rivers* with a large population along their banks are unfit sources.

That distilled water, however pure, must be thoroughly oxygenated by sterilized air in order to be perfect drinking-water.

The death-rate of a city is largely determined by the quality of the water used. The appearance of the water is no proof of its sanitary quality.

Muddy water, like that of the Mississippi, may be highly sanitary, while that of a lagoon may be as clear and sparkling as crystal, and yet be laden with death.

For clearing or purifying the water-supply of large cities the system of *slow sand filtration* as practiced in London and Hamburg is the only method which has thoroughly stood the test of *experience*. The habitual use of alum, of hydrochlorate of lime, or any such caustic or corrosive chemicals, is totally *inadmissible*.

Far more, even, than pure air is pure water requisite for civilized man, and it is the imperative duty of our honored profession, to which all look for safe sanitary counsel, to hold fast to and teach the truth, and point out the dangers which inevitably follow the violation of Nature's immutable laws.

COAST AND MOUNTAIN CLIMATES COMPARED.

BUSHROD W. JAMES, M.D., LL.D., PHILADELPHIA.

Aside from the pleasures and charms of both seaside and mountain health-resorts, we have to consider, in this article, simply the advantages of one over the other in its benefit to the invalid, or in the influence it may have upon the healthy in preventing them from becoming invalids.

The condition of mountain climates being somewhat different from that near the sea, and as we have in this country a large area of sea, gulf and lake coast, as well as a series of long ranges of mountains running northward and southward in the eastern, middle and far western part of our country, it is easy to be seen that a climate to benefit every class of cases can be reached.

These observations being for the consideration of physicians near the eastern coast, being simply shut out therefrom by the State of New Jersey, I will mainly consider the Atlantic coast climate, and the nearby regions and mountains of the Allegheny and Blue Ridge ranges, and refer to the Pacific coast and the Sierra Nevada and coast and other ranges, by way of contrast, as a separate kind of climate too far distant for the average summer resident at an eastern health resort.

Looking along the Atlantic coast-line from Florida to Cape Sable, Nova Scotia, two projecting points of land are found extending a considerable distance into the ocean, one being off North Carolina, east of Pamlico Sound, known as Cape Hatteras, and the other being the projecting point known as Nantucket Island and Martha's Vineyard, off the coast of the mainland of Rhode Island; also the peninsular tongue of land known as Cape Cod, extending well out to sea in Massachusetts a little to the eastward from Boston.

Among other available summer resorts easy of access are to be mentioned Cape Charles and Cape Henry, with Fortress Monroe lying in the Chesapeake Bay; likewise Cape May at the lower extremity of New Jersey, a most admirable seaside resort; likewise the admirable and wonderful Atlantic City, and the various places along the coast, including such as Ocean Grove, Asbury Park, Long Branch, Sandy Hook, Brighton and Manhattan, and many other fine resorts on Long Island, with its numerous health stations easily reached from the city of New York or Boston—Block Island and Newport coming in for a share of a good sea atmosphere a little farther to the westward than Nantucket or Cape Cod.

From Boston to the Bay of Fundy the summer climate is usually colder than at points south of the cities of New York, Philadelphia and Baltimore, and consequently these northern resorts make very excellent residences for those affected by the heat in the more southern cities and towns farther down the coast, and to the westward. The Nova Scotia coast, which extends quite to the eastward, and New Brunswick, and the eastern and northern end of Maine, all have advantages of both

northern coolness and a large amount of ozonized atmosphere coming over the waters of the Atlantic Ocean.

Great benefit frequently arises from a simple change of climate, provided the same is not of an enervating character: so that the large cities of the middle and interior and Southern States pour forth their population, both healthy and otherwise, towards the northeast coast resorts during three or four months of the warmer season, and this is counterbalanced by the population of the larger cities along the northern seaboard largely migrating to the Georgia, Florida and the Gulf of Mexico coast during the intensely cold season of the winter.

Many people come eastward, as far even as from the valley of the Mississippi, and those from the far Western States trend to the Pacific Ocean and Southern California as the best climate for a change from the monotony of home-life in one individual form of climate, thereby encouraging and building up health-resorts both along the Atlantic coast from its southern extremity to its northern limit and along the Pacific coast in California, and similarly along Puget Sound in Washington, which is also very cool but a remarkably healthful climate for a large class of people who have a tendency to diseases which are influenced somewhat by climatic changes.

The southeastern portion of Alaska is a remarkably healthful climate for the summer season, but as yet is quite inaccessible for the late autumn and winter season on account of the transportation being limited to the warmer months of the year.

I have found, in my therapeutic climatic observations, that the simple change of climate, as I suggested, is beneficial to neurotic and neurasthenic cases, so that many cases who have a permanent residence along the seacoast temporarily change location, and obtain relief by removing from a shore residence to some interior locality.

Many city health-resort seekers have of more recent years adopted the plan of dividing their season of recreation and rest at the seashore during the early part of the summer, and when the cooler nights appear spend a few weeks of the latter part among the foothills or at mountain hotels; and when the cooler weather arrives, the migrating populace after health returns to

its home-climate, and this swarming multitude abandon their out-door life for the confined atmosphere of the home and probably impure atmosphere of city life, with its deleterious atmospheric contaminations, which we are all aware exist in the large centres of population.

Unless the mountain climate is prejudicial to an individual, it is well to adopt this plan of spending a portion of the time at the seashore and a portion at the mountains.

All seacoast atmospheres contain an increased amount of moisture over those of the valleys or places lying back some distance from the humid winds of the ocean or immediate coast line.

In comparing the various Pacific coast resorts with the Atlantic we find a greater amount of moisture present, on an average, for the year, on the Pacific coast than on the Atlantic; but there is more sunshine and absence of rain during several months of the year in the summer season along the lower coast-line of the Pacific and in the Sierra Nevada valleys.

The fogs of which invalids are so much afraid are a blessing to the people who have become accustomed to the exhilarating yet moisture-laden winds which blow with regularity from the ocean over the lands nearby almost every day in the year.

During August and September, in the region of San Francisco, the fogs are much more dense than in the winter season or early part of the summer or spring, and the winds are usually more keen; and, as they prevail in the afternoon, evening and night, an additional amount of clothing has to be worn in order to enjoy comfort in these strong oceanic currents of air.

The Mediterranean winter resorts, as well as some of the summer places sought by pleasure-seekers for comfort, are practically no better than many along the Atlantic coast, and especially so of others along the southern California coast or in the immediate neighborhood of Puget Sound, and along the lower Columbia River and its tributaries near the coast—this more northern climate being adapted for persons having a residence in the North and the East in this country or from other northern parts of the world.

Many such people are uncomfortable in a warm moist climate such as we have along the lower coast in California, but they can stand a cool mountain altitude of two thousand to four thousand feet, which gives such temperaments a great deal more comfort than a residence directly in the sea air of the beaches.

The mountain climates of this country are equal to any in Scotland, Switzerland, Germany, Austria, Italy or France. Probably the only reason why the Americans do not more generally encourage their own mountain climates is because the hotel and village life of foreign resorts afford better accommodations than can be obtained here, as yet, in many of our delightful situations in the Allegheny, Rocky, Sierra Nevada and Wahsatch Mountains, and some coast lines in this country.

Time will, however, change this condition of things, and Americans will be contented with their own home-climates; and when an abundance of travel will encourage capitalists to erect suitable fine hotels and provide good accommodations for wealthy invalids, or for wealthy people desiring to prevent ill-health, this feature will be overcome.

Much has been written about the proper climate for tubercular cases. We have always held the opinion that the peculiar sensitiveness of the patient and the condition of such invalids are to be taken into consideration and a climate selected to suit the same—plenty of sunshine, and an absence from clay or rocky soil, which, as a general rule, tends to hold the moisture in the earth near the surface.

In cases of chronic rheumatism the dry atmosphere near the coast-line is most beneficial, of course selecting a cooler spot for summer and a warmer one for winter in the mild temperature of either of these seasons. There is not a very large number of diseases that receive benefit from climatic changes, however.

Asthma and hay fever do better, as a rule, in the high altitudes, away from much dust or the pollen of summer- and autumnal-blooming plants.

Ocean trips are usually very good for such cases, provided they keep away from the fog-laden voyages along the northern bays and points of land in August and the early autumn.

In hepatic or malarial disorders, or convalescents from low types of fever, the invalid should avoid warm, moist, marshy districts or low-lying valleys, and select a mountain resort as a general rule.

Those suffering from scrofulous or skin diseases usually need a mountainous valley region where mineral waters are charged with sulphur, soda, or other saline ingredients, and where invalids can take the mineral baths and also drink of these alkaline waters.

Ordinary catarrhal diseases find most comfort in the dry rare atmosphere of the higher altitudes, or in sea air free from the winds that blow over hot dry sand in the neighborhood.

Preferable to sea air for such cases would be one where pine forests abound, to mingle their soothing emanations with the air direct from the ocean.

I want to strongly condemn the plan, in vogue among physicians unfamiliar with what climate will do for tubercular or even other cases, of sending invalids in the last stages of the disease away from home to distant localities, giving false impressions, and holding out the prospect of a cure when the medical man himself knows that it is a mere matter of a limit of time for the patient to live.

The fatigue and suffering, together with the oppression and inconvenience of travelling under such circumstances, especially to a distant climate, occasions a great deal of expense and distress to the invalid and anxiety to the family in the almost herculean effort on the part of the patient to reach the destination selected by the medical adviser, oftentimes the patient not even reaching the objective point, and in a large majority of cases never getting away from the place to which he may have been sent.

Greater comfort, and possibly a longer life with less distress to all the family and friends, will in such cases be attained by fairly and honestly telling the patient that he or she is too ill to leave home, and that such an invalid must not change from the climate in which he or she is living.

THE CARE OF "THE HOUSE BEAUTIFUL."

TRIMBLE PRATT, M.D., MEDIA.

One enters upon the task of writing upon sanatory science with a degree of reluctance, when contemplating the magnitude and importance of the subject, embodying as it does a consideration of the most vital principles upon which is builded and sustained the most perfect thing in nature, the human body, "The House Beautiful" as it has been most fittingly styled.

While the subject of the preservation of health has received consideration by a few of those most learned since very ancient times, the rank and file of humankind have sadly neglected, and teachers overlooked, the importance of imparting knowledge adequate to the promotion of health, the elements of which should constitute a part of the curriculum of every school in the land. Then with the acquired knowledge of the principles of sanatory science should be coupled such regard for honesty of purpose as would make it possible to have such regulations adopted as would secure to those, otherwise helpless of themselves, such immunity from disease as should be vouchsafed to every human being. And in this connection, in passing, it is proper to note that public sanitation is markedly lacking in efficiency, considering all that has been written upon the subject, which fact must emphasize the statement that people generally have failed to become aroused to the importance of a more thorough and general knowledge of the principles of sanitation.

Molesworth has said that "health and liberty are, without doubt, the greatest natural blessings mankind is capable of enjoying." Natural, because the contrary states are purely accidental, and arise from nature debauched or depraved. That thousands of lives should be sacrificed annually, in this day and generation, through carelessness, negligence, and lack of knowledge, is most unpardonable, to say the least.

As a conservator of health, the physician has a responsibility of great import, since it is his privilege to be educated along these lines, and, impelled by that high sense of philanthropy which should attach to every one worthy the calling, should make him a self-constituted agent to further the beneficent results to be attained by a practical application of the principles involved in sanitation.

That this same "House Beautiful," the most perfect handiwork of God, should be suffered to waste and die through ignorance and neglect is a stigma that we should not permit to be placed at our door.

Sanitation has not only to do with the external influences by which we are surrounded, but internally, as well, the house must be so organized that the harmonious and reciprocal action of all its parts will be sufficient to maintain perfect health, barring such inheritances as may be beyond our power to eliminate, only with care through succeeding generations. While a discussion of the physiological condition of the body may not be germane to the subject in hand, it goes without saying that a healthy body is much less liable to be affected by external influences than one in which the harmonious relationship between the different organs and tissues has been impaired; hence the doctor would begin the work of sanitation in the human body by securing and maintaining such a perfect condition of the nervous system as would insure a vital state, equal to the resistance of the morbid influence to which, under present conditions, the body falls an easy prey. I have said that upon the vital influence of the nervous system depends the functional activity of all the organs and tissues, assuming that this most vital portion dominates all functional movement. There is little doubt that the duration of man's life depends on his healthfulness, and this upon the observance of certain organic laws, the non-observance of which must of necessity shorten the duration of life in direct proportion as such laws have been disregarded, and such deterioration must become more and more in evidence in each succeeding generation.

Since it would be an impossibility in the time and space allotted to me to compass the field, I will only touch upon some

of the more salient points, leaving the more detailed and expansive consideration of the subject for those more competent than I.

The organic laws are violated in different ways: first, by the individual entailing upon himself, and probably on his posterity, the evil consequences of a wanton disregard of the noble aspiration which should inspire every one with an ambition to become a benefactor of his race, and no one with a defective body can hope to realize the most for either himself or his posterity.

Then, in the second place, there are the acts of commission, as well as those of omission, of a combination of individuals, by which the body politic may suffer, and often for a long time, without adequate means of relief; and this is an evil that in my judgment should be provided for, and against, by the enactment of such stringent State laws as would secure to otherwise helpless communities such healthful conditions as should be their due.

As to the first proposition: The care which should be bestowed upon one's body must depend, as I have said, upon such rudimentary knowledge, at least, as would enable every one to understand the proper means for the promotion of healthful organic action; being capable of a proper selection of food and clothing, and as well to secure the proper ventilation and cleanliness of the home, will necessarily secure a greater expectancy.

As, in the more sparsely inhabited, and consequently less perfectly drained, sections of country, endemic diseases may be more prevalent, a solution of which difficulty must await the natural course of events, and, until such time as these sections may become inhabited by people in sufficient number, armed with requisite knowledge, the life of man in these localities must be shorter than the average, it is probably a reasonable presumption that the endemic causes of disease are more destructive of health and life than individual irregularities.

Pure air, which is one of the chief essentials of health, can only be secured by the removal of all vitiating influences of whatever origin; and as far as we may be able to accomplish

this by the infusion of increased knowledge and the enactment and enforcement of more rigid laws will we benefit not only ourselves, but the human race in general.

The rapid strides that have been made in bacteriological researches in recent years should go far to fortify us against the blighting influences of the various micro-organisms, which we now know to be lying in wait at every threshold, seeking only the opportunity to effect our destruction. To which end we have a safeguard interposed by way of the health board, which is, or should be, one of the most munificent acquisitions to our code of both local and general legal regulations. And if such organizations are fully alive to the responsibility devolving upon them, their services may and should become of inestimable value to those who may be so fortunate as to be the objects of their guardianship. And being sensible of the importance of their trust, such boards should feel it incumbent upon them to be self-constituted detective agencies, not postponing action until complaint, and perhaps death, should compel the obligatory exercise of their power, but ever on the alert, and prepared to turn the searchlight upon every hygienic irregularity that may stalk abroad in their respective bailiwicks; then, with such vigorous and energetic action as is delegated to them by virtue of authority, mortality will be reduced to a minimum.

As to the food we eat: This is a large subject of itself, an exhaustive consideration of which would extend my paper far beyond the prescribed limit. In order that the organism may be as immune from disease as possible, it is necessary that the blood-supply should be of the purest quality, since it is an established fact that its serum constitutes the chief germicidal quantity or medium, and to this end our food should be of proper quality and quantity, taken at regular intervals.

As to the water we drink, I am a stickler for pure water, since it is quite possible to obtain a fairly pure water either in cities or out (where the supply is impure in the city) at such a small cost that to imbibe disease-breeding germs from this source is most inexcusable, except on the ground of absolute ignorance. The germs which water may contain we know are

readily destroyed by boiling, and if there should be discoloration from the presence of any foreign matter, this may be removed by filtration, such filters being on the market in abundance, and at very moderate cost—certainly much less than doctors' or undertakers' bills. Since it is objected that water, when boiled, has a flat and unnatural taste, it will be found that if, while cooling, the vessel containing it be closely covered, preventing the escape of the steam, this objection will be removed.

In order that the foregoing elements—air, food, and water—may be perfectly incorporated in the organism, that the most may be realized from them in the process of reconstruction, there should be such exercise, of a uniform character, as will enable the organism to utilize these several elements in the most perfect manner. Such exercise should be both mental and physical, in order that there may be maintained such an equilibrium of vital action as to preclude the possibility of that want of balance which one so frequently observes in those who, by reason of occupation and lack of intelligent consideration of self, have become dispossessed of that organic co-ordination which serves to establish a complementary relationship between the mental and physical being. Then there is the exercise of the lungs through the respiratory act, which is far from the least in importance, since through this function the blood becomes oxygenized; and the more rapidly and completely this is accomplished, the more perfectly will the process of reconstruction be carried on, thus securing for healthful, vital activity material gain. Then, too, the more fully the lungs are used, and, consequently, developed, the less are they liable to become the seat of disease. And finally, with a thorough bath to open the avenues for the escape of a very large portion of all these microbic elements, we leave this "House Beautiful" to the care of its possessor, with the hope that a possible grain of truth, falling from these pages, may take root, and, growing:

> "Fill the broad land o'er, so beautiful,
> With life so pure and so painless,
> That homage true, from shore to shore,
> May be born in gratitude most gracious."

REPORT OF THE SECTION OF CLINICAL MEDICINE.

The Relation of Homœopathy to Life-Insurance, by F. W. Burlingame, M.D.
Some Points Connected with the Diagnosis of Diseases of the Kidneys, by Clarence Bartlett, M.D.
Clinical Cases, by Mary Branson, M.D.
Diphtheria, by I. B. Gilbert, M.D.
Nutrition, by L. B. Griffith, M.D.
Rheumatism, by W. M. Griffith, M.D.
The Topical Application of Antiseptics in Diphtheria, by B. B. Gumpert, M.D.
Rheumatism, by A. B. Lichtenwalner, M.D.
A Seldom-Recognized Factor for Some of Our Failures with Drugs, by E. R. Snader, M.D.
Sexuality; Why an Avoided Subject, by R. E. Tomlin, M.D.
Paralysis of Anus; A Peculiar Case, by Chandler Weaver, M.D.
Demonstration of the Plasmodium Malariæ by Means of the Projection Lantern, by O. S. Haines, M.D., and D. B. James, M.D.
Can Homœopathy Cure Malaria? by J. C. Guernsey, M.D.

THE RELATION OF HOMŒOPATHY TO LIFE-INSURANCE.

F. W. BURLINGAME, M.D., M'KEESPORT.

For years I have felt humiliated by the course pursued by the old-line life-insurance companies toward homœopathic physicians. Not only has this humiliation been felt while talking to the gentlemanly representatives of said companies, but many times I have been asked by friends and patrons to explain the discrimination. "How is it," they will ask, "that the old-line insurance companies won't employ a homœopathic physician as examiner?" If the inquirer is particularly well acquainted, he facetiously adds, "Is it because you homœopaths are not supposed to know enough to attend to the business?" If the inquirer is not acquainted to the joking point he simply looks the inquiry.

Several times I have been told by friends who were life-insur-

ance agents that they would be only too glad to recommend me for appointment as medical examiner, but the company did not recognize homœopaths. That may have been meant in all kindness, but it is what I would call "rubbing it in."

"Will they insure a good homœopath?" I ask. "Certainly," is the invariable reply. "Well, your company can go to thunder for all of me," I generally tell them. So long as the old-line companies refuse to recognize homœopathic physicians as examiners, I will ride the goat again when I want more insurance and stick to fraternal societies. I have been something of a joiner in my time, and have been examiner for a number of fraternal societies, and have examined in the neighborhood of 1000 applicants for fraternal insurance, over 450 having been made for one order, and without desiring to throw bouquets at myself, I will say that I received an unsolicited testimonial from the president of this order, thanking me for the care I had taken of the order's interests. I simply state this, not to blow my own horn, but because I am a homœopath, and am considered capable of examining at least for a fraternal order.

For several years I have thought this subject ought to be agitated by our State societies, and last spring, when I concluded to start the ball rolling, I formulated what to me seemed a brilliant plan of operation.

I would write to a large number of old-line insurance companies and ask them what they meant by this discrimination. I would write to the fraternal societies and find if the work of the homœopathic examiners was on a par with the work of the old school. Several other brilliant ideas I was going to carry out, when I had the wind taken out of my sails; my bright ideas died "a-borning;" but I was none the less determined to have my say before this Society. It is with shame that I admit that I never joined the American Institute of Homœopathy until this summer. I believe it is the duty of every homœopathic physician to join that organization. Last spring I was in the office of Dr. J. H. McClelland, and mentioned the subject of my proposed paper. He asked me if I had read the proceedings of the American Institute. I meekly responded that I was

not a member. He informed me that I would have to hurry up if I ever expected to become a senior. He then loaded me down with an armful of TRANSACTIONS that I might have reference, and I found that much work has been done by that body in this line, and, further, that the committee had stolen all of my brilliant ideas; they had corresponded with the companies, and published the results.

I have looked over the TRANSACTIONS of our State Society since 1891 and failed to see where this subject has been discussed. Possibly I have overlooked some discussion on the matter; if so, it will do no harm to revive the subject. I believe that all our societies, both local and State, as well as the national body, should agitate this matter until justice is done; and, while my original plan of presenting this matter has been blocked, I will quote freely from the 1897 and 1898 *Transactions* of the American Institute. We, as homœopaths, believe that we have brains enough and are sufficiently educated to compete with the average old-school M.D.

Our colleges were the first to demand educational requirements for their matriculants, and the first to extend the course of study to three and then to four years.

It is admitted by "our friends, the enemy," that, proportionately, we have the bulk of the wealth, education and refinement among our patrons.

As long back as the winter of 1880 and 1881, along with about seventy-five other homœopathic students, I attended a lecture in one of the old-school colleges in Cleveland. The lecture was on homœopathy, and was delivered by the Dean of the college. After a painful and labored explanation of the fallacies of homœopathy he very impressively said: "But, gentlemen, the time is past when you can down homœopathy by ridicule and abuse. They have a hold on the educated and wealthy classes in this country that can only be overcome by hard, conscientious work. It is with shame that I admit (but I do it for your good) that I can name three homœopathic physicians in the city of Cleveland who ring more silver door-bells on Euclid Avenue and Prospect Street than all the old-school physicians combined." We had been very meek up to that

time, but that was the signal for such an outburst of feeling as only a medical student is capable of.

While on this subject of wealth, allow me to quote from the report of the Committee on Insurance of the A. I. H. for 1897: "As to the relative amount of insurance applied for by patrons of homœopathy, your committee has made some investigations in different companies. This has been accomplished by noting the answers to the question, 'Who is your family physician?' Or, in the absence of such reply, 'Who attended you in your last illness?' If the physician named is a homœopath the policy is placed to the credit of the homœopathic school. Otherwise, to the credit of the allopathic school. In this way we find in one company in which the question is answered: Business done in stated period, $826,000. Allopathic, $528,-500. Homœopathic, $267,500. Number of policies issued: Allopathic, 140; average amount, $3901. Homœopathic, 53; average amount, $5047. Allopathic, 67 per cent. Homœopathic, 33 per cent. We furnish 33 per cent. Our proper proportion in city considered is 15 per cent. In the territory investigated in this manner we furnish 35 per cent. of all insurance with 14 per cent. of the physicians, or we furnish 2½ times as much per physician.

"As to the question of discrimination. The Ætna Life Ins. Co. of Hartford, Conn., in 20 cities, reports 56 examiners, not one of whom is a homœopath. The N. Y. Life, in 13 cities, 51 examiners; no homœopaths. The Northwestern Mutual Life Ins. Co. of Milwaukee, in 10 cities, 43 examiners, of whom 2 are homœopaths. The Berkshire Life Ins. Co. for U. S., 558 examiners, of whom 9 are homœopaths. Cleveland has 2, Cincinnati 1, the other 6 being in small towns. The Equitable of N. Y., in 17 cities, reports 132 examiners, 1 of whom is given in Polk's Directory as a homœopath, though a graduate of an old-school. The Metropolitan Life Ins. Co., 8 cities, 49 examiners; no homœopaths. The John Hancock Mutual Life Ins. Co. of Boston, in 7 cities, 28 examiners; no homœopaths. The Travelers of Hartford, in 10 cities, 24 examiners; no homœopaths. The Provident Life and Trust Co. of Phila., in 13 cities, reporting 30 examiners, 3 of whom are homœopaths.

And so on through the list. Many other companies were reported, but it would be a virtual repetition to give them here. The fact stands that there is an injustice done to our school. A blemish is cast on the fair name of homœopathy that it is our duty to eradicate. The old-line companies sit back and complacently ask, in the language of Boss Tweed, 'What are you going to do about it?'"

The day is past when an excuse can be given that the medical training of our colleges is inferior to the old school, for the Association of Medical Colleges at their meeting in 1897 passed a resolution, part of which reads: "To graduates and students of homœopathic and eclectic medicine credit shall be given for as many years as they attended those colleges."

I have no particular plan of operation to suggest. The American Institute has done considerable work in this line; but it is only by constant agitation that great reforms are brought about, and why should the Homœopathic Society of the great Keystone State be a laggard in a matter that so much concerns it?

We should adopt some definite plan of action, to be persistently adhered to until we receive the recognition that is due us.

NOTE.—Since completing the above article I have received an appointment as medical examiner for the Iowa Life—an old-line insurance company.

DISCUSSION.

DR. B. W. JAMES: I would like to say something on the latter part of this paper particularly, that is in regard to life-insurance. I think it is an error to say that we are imposed upon as a profession. We must remember that these companies were in existence before homœopathy was established in this country, and it is not a matter of injustice, but a matter of progress. I think we are doing very well to get any appointment at all. It is a matter of business, not homœopathy. These men employ every one they can get. If they can insure a homœopath for one hundred thousand dollars they will do it. People look forward to getting the very best insurance, and it does not matter whether they are examined by a homœopathic or an allopathic physician.

If the companies have for many years had a good allopathic physician, they see no reason why they should all over the country change physicians who are established with them, and in whom they have confidence, simply because homœopathy came up. It is a matter of progress on our part, and not a matter of injustice on the part of the insurance companies. I would just as lief be insured by an allopath as a homœopath, although I might prefer the latter. However, I will not stop my insurance because I am to be examined by an allopathic physician. We are not gaining the recognition, as stated by the American Institute, but we are gaining recognition all over the country. Some two or three years ago I was on that committee, and I found that these companies were all willing to appoint homœopathic physicians, provided they had enough confidence in them when their names were presented to the general board to appoint them. It was not a matter of homœopathy, but a matter of business—the best examiners—the best men. If an examiner makes a mistake and a man dies, and they suffer fifty thousand dollars' worth of loss, it is a matter of considerable interest to them, and they will appoint, regardless of "pathy," the very best men they can get for their interest.

Dr. R. E. Tomlin: I wish we had more time to discuss this question. Some of you know I have been interested in life insurance practically ever since I graduated. I have had the honor to be the Supreme Medical Examiner and Director in several companies. I want to say that the statements of Dr. Burlingame, with due respect to Dr. James, are more nearly true than otherwise. There is discrimination, and I know it. I cannot go into it. I would like to take up every point. I know that in the company with which I was recently connected the discrimination was marked, and even though I was medical director in certain companies, I had the greatest difficulty in getting into another company that was a mutual company. The time is too brief to bring up any individual consideration, but the thoughts in Dr. Burlingame's paper are true. There are discriminations made, and they can be proven, although I have succeeded in getting into these organizations, because I made up my mind I wanted to get in, and did so.

Dr. B. W. James: I want to correct a misapprehension. I didn't in any way say anything about the statistics. I have nothing to say as to the matter of not making any headway, but I don't want to create the impression that I am criticising the matter of discrimination. I think the men are not discriminating against us as a good school, but against those whom they feel are not the men they want to represent their business interests. You forget that this matter of life-insurance is a matter of money between the individual insured and the company; and homœopathy, as I have said, does not enter into it. I want our homœopaths in everywhere. I want to see a man progressive. But you cannot convince a business company that it is its interest to take up men when they can find good men to do the work which they think will be to the best interest of its company.

SOME POINTS CONNECTED WITH THE DIAGNOSIS OF DISEASES OF THE KIDNEYS.

CLARENCE BARTLETT, M.D., PHILADELPHIA.

In the clinical study of diseases of most of the viscera an investigation of the manner in which the suspected organs perform their functions constitutes a very important part of the examination. In the study of renal diseases, however, the many positively known facts, each bearing a positive significance, have led physicians to ignore the study of the kidneys as organs possessed of a function or functions, while paying almost exclusive attention to the well-attested symptoms, albuminuria, tube-casts, urea percentage, etc. Each of these has a clinical value which all of us must appreciate, but their discovery does not by any means decide the condition of the organs under study. Their true value is to be estimated only by studying them in conjunction with the history of the case and the present status of symptoms and physical signs. Practical and theoretical knowledge is, of course, increasing. There was a time when the presence of albuminuria was regarded as

a *sine qua non* for the diagnosis of the class of cases generically known as Bright's disease. While by no means wishing to ignore the diagnostic value of this symptom, I must say that a failure to estimate it at its proper value is responsible for very many erroneous opinions. Especially does this remark apply to chronic interstitial nephritis, also known as gouty, contracted or granular kidney. In this disease albuminuria is rarely prominent, and is very frequently absent over long periods of time. Hence, even when present, it is liable to escape detection. If, however, the physician bears in mind the clinical history of chronic interstitial nephritis, and studies the kidneys as organs possessed of an excretory function eliminating a definite quantity of urine of specific gravity and composition approximating the physiological standard within certain well-known limits, he will make but few diagnostic mistakes. It is now universally recognized that interstitial nephritis is associated with certain cardio-vascular phenomena, namely, thickening of the arterial coats, hypertrophy of the left ventricle, and increased arterial tension. These phenomena, of themselves, are all-sufficient to establish the diagnosis were no other data available. Fortunately, we need not depend upon them alone for an opinion. Routine examination may lead to noting "Urinary examination negative in its results." Systematic examination will demonstrate increased quantity of urine of low specific gravity, with marked reduction of phosphoric acid elimination. One recent writer—Laidlaw, of New York—has taken the position that deficient phosphoric acid elimination is "the" symptom, the existence of which must be determined before a diagnosis can be made, and the general consensus of opinion confirms him in the position he has taken respecting the value of this symptom. Polyuria is generally recognized as one of the early symptoms of the disease; and, indeed, it has a positive value, especially when occurring in persons at or beyond middle age, and when the polyuria is especially marked at night. Mitchell, of Chicago, directed attention to this point several years ago, stating that a persistent increase of the night's urine over that of the day was to be regarded as strong presumptive evidence of unsound kidneys. The same writer

antedated many authorities in attaching great clinical importance to deficient phosphoric acid elimination.

It is universally conceded that the most important excrementitious component of the urine is urea, and, as a result, all of us have placed great value on the accurate estimate of the quantity of urea excreted. This is all very well as far as it goes: but it does not go far enough. Healthy individuals taking a fixed quantity of mixed food should, if leading a moderately active life, eliminate a definite quantity of urea, variously estimated as from 400 to 500 grains daily. It is to be observed in this connection that the character and quantity of food taken and the habits of the individual affect the urea percentage. Again, though the kidneys be perfectly sound, urea percentage may be decidedly altered because of general malnutrition. Hence the percentage of urea eliminated must not of itself be regarded as the index of the state of health of the kidneys. Still further, the experimental investigations of John Rose Bradford have shown that when portions of the kidneys amounting to not more than two-thirds of the entire structure of these glands are destroyed, the animal still preserves its normal standard of nutrition, and may live on indefinitely in apparently good health; but an increased quantity of urine, rich in urea, is eliminated. But if the destruction of tissue includes more than the amount above specified, the animal emaciates rapidly, the quantity of urine diminishes, while the urea elimination is enormously increased; and, notwithstanding the free excretion of urea, examination of the blood and muscles shows a retention of that substance in these tissues far in excess of the normal standard.

It is not an easy matter as yet to give these investigations of Bradford their proper place in clinical medicine. The polyuria succeeding the destruction of two-thirds or less of the entire renal structure seems to demonstrate that the same symptom when occurring in conjunction with chronic interstitial nephritis is due to the destruction of kidney substance, and not, as heretofore maintained by many authorities, to the increased vascular pressure so commonly attendant upon this disease. The explanation to be attached to increase of urea

after extensive kidney extirpation is not so easy. It is evident, of course, that there is increased urea production in the tissues, especially in the muscles; but "Why does this occur" is a most proper question. Bradford believes—and no better explanation, I take it, can be given in the present state of medical knowledge—that the kidneys may also exert a function as organs of internal secretion, the destruction of which causes important tissue changes throughout the entire body.

Reference to urea excretion naturally suggests the subject of uræmia. As to what constitutes uræmia is a question more easily asked than answered. As originated, the term was intended, of course, to designate the poisoning of the blood by retention of urea which should be eliminated. An extensive hospital experience with the terminal stages of renal diseases shows that the majority at least of cases of uræmia, so-called, are not examples of uræmia at all, but simply examples of modes of death from renal disorder. The great doubt surrounding the nature of so-called uræmia is well shown by the definition of that condition given by Bradford (*Allbutt's Practice*, vol. iv., p. 324): "A group of symptoms arising during the course of many renal diseases; always grave, not infrequently fatal, and dependent mainly, but not entirely, upon derangement of the functions of the nervous system." It will be observed that this definition expresses no opinion as to the merits of the mechanical and toxæmic theories advanced for the explanation of this condition, and it well illustrates current uncertainty on the subject. A former coroner's physician, H. F. Formad, after an autopsy on one of my patients who died with rapidly-appearing coma and with well-advanced kidney disease as the only pathological condition, remarked that death did not result from uræmia, although dependent upon kidney disease. His successor, Dr. Henry Cattell, in a very similar case, stated that uræmia was the cause of death, basing his diagnosis on the state of the kidneys. In reply to my question as to what constituted uræmia, Dr. Cattell said that uræmia was a term that covered a multitude of sins and ignorance; that it was a convenient term to use to designate the cause of the fatal termination of renal diseases. In both

patients the flow of urine was somewhat diminished; neither had albuminuria, and both excreted sufficient urea to lead one to believe that there was sufficient of that substance excreted to make poisoning by it out of the question.

In hospital practice it is a common experience to receive patients taken with coma in the midst of apparently good health. The majority of these exhibit the characteristic urinary changes of interstitial nephritis; others have merely deficient urination, with or without high arterial tension and thickening of the radial arteries' casts; and nearly all of those who die are discovered to have well-advanced cirrhosis of the kidneys and cardiac hypertrophy. For want of a better term we are obliged to say that they died of uræmia, basing the diagnosis on the symptoms rather than upon any positive evidence of uræmic poisoning.

The evidence at our disposal tends to show that the phenomena of so-called uræmia are of toxæmic rather than mechanical origin. In view of the fact that the symptoms accompanying this condition may consist of coma, delirium, paralysis, convulsion, dyspnœa, or gastro-intestinal disturbance, it is fair to presume that the poison producing the disturbance cannot be the same in every case. All poisons introduced into the body from without exhibit a well-defined symptomatology subject to exceptions within circumscribed limits, due to the idiosyncrasies of the patient. In no instance, however, do we observe the great symptomatic variations described as characteristic of the so-called uræmia in its various types. That the condition is one of blood-poisoning we now assume. To persist in speaking of it as uræmia tends to clinical and pathological inaccuracy. The term "renal toxæmia" should be substituted as suggesting the organ at fault, while not binding us to assume any special poison as producing the symptoms.

Cases of renal toxæmia vary greatly in their clinical course. The division into acute (including the fulminating) and chronic types is well known. The so-called latent uræmia is less frequently observed, though none the less real. It occurs usually in conjunction with calculous suppression. The symptoms are remarkable for their mildness; indeed they do not

resemble in the least the ordinary picture of renal toxæmia. Although no urine may be passed for ten or twelve days, the patient complains of but little other than weakness and drowsiness; the tongue is dry and brown; and the pupils are contracted. There may be some slight twitching of muscles. The temperature is subnormal.

Attempts have been made to explain the cerebral symptoms of renal toxæmia by claiming the existence of œdema or anæmia of the brain, general or localized according to the extent of the symptoms. Such an explanation is theoretical in the extreme, as it has always been impossible in the cases in which these changes have been found to determine whether they were the cause or the result of the convulsive phenomena. My case of Jacksonian epilepsy reported years ago exhibited no local œdema, while there existed widespread atheromatous changes in the cerebral blood-vessels, the basilar artery virtually being as brittle as a pipe-stem. Dr. Goodno's examination of the motor portion of the cortex shows degenerative changes. It is claimed that a systemic poison is incapable of producing localized effects. In most instances this is true; but we have remarkable examples of poisons having a selective affinity for a locality, *e.g.*, lead, arsenic, and alcohol in the production of neuritis of peculiar distribution. It is fair to presume that the active poison of renal toxæmia may likewise exert a selective action on this or that portion of the brain.

The orthodox convulsion of renal toxæmia consists of tonic and clonic spasms; in other words it is of the epileptiform type. Too much reliance must not be paid to this, for in two instances I have seen hysteroid convulsions, in both of which the diagnosis was confirmed by autopsy. It is more than probable that the motor symptoms were indirect results of the toxæmia, the patients in all likelihood being highly neurotic.

Incidental reference to albuminuria was made in the opening words of this paper. The value of this symptom may be stated briefly as follows: The presence of albuminuria indicates only that a pathological condition of some kind is present; its absence must be regarded as a negative sign, and possessed of but little diagnostic value. If present, it may be due to the

accidental contamination of the urine with an albuminous fluid, or it may be a true albuminuria. If the latter, it may or may not be symptomatic of organic kidney disease. As a non-renal symptom, it may be purely mechanical, arising from congestion due to cardiac or pulmonary disease; hæmatogenous as the result of anæmia, toxæmia, or fever; purely functional, which in the present state of medical knowledge may be taken to mean almost anything. In each and every case of albuminuria the significance of the symptom can only be obtained by studying it in conjunction with all the other signs and symptoms, and the life history of the patient. It is unfortunate that this opinion of albuminuria is not more prevalent than it is, for much harm is now done on the one hand by regarding an ephemeral albuminuria accidentally discovered, *e.g.*, in the course of an examination for life-insurance, as a serious matter; and on the other hand serious renal disease fails of recognition because albuminuria happens to be absent.

As regards the absence of albuminuria in the course of chronic interstitial nephritis, it is astonishing to note its frequency. Time after time have I seen patients die with advanced kidney disease, with this symptom noteworthy for its absence.

The presence of tube-casts, especially of the granular and epithelial varieties, is to be regarded as pointing unquestionably to the presence of renal disease. The hyaline variety may be present in functional disturbances, and, it is claimed, even in healthy persons. While casts are liable to appear especially in albuminous urines, the fact that a urine is non-albuminous should not lead to the neglect of a microscopic examination for casts. At one time it was thought that the character of the casts present afforded a sure index of the pathological condition of the kidneys. This is a mistake. On this subject Lionel Beale remarks: "Dr. Basham thinks he can judge of the stage of Bright's disease by the character of the urinary sediment. I wish I could agree with him in this conclusion. The more carefully the matter is investigated, the more convinced am I that it is unsafe in many cases to attempt to draw inferences as to the stage of the disease from the character of the urinary

sediment only. Nothing but a very careful consideration of every point will enable us to arrive at a general conclusion concerning the state of the disease." Grainger Stewart, referring to the diagnostic value of casts, says: "Casts are of undoubted value in establishing the existence of Bright's disease, considered generically, but they afford comparatively little assistance in the differential diagnosis of the different forms. Any form of tube-cast may occur in any form of the disease, and at almost any stage. Indeed all the leading varieties may occur simultaneously in one case." Tirard, commenting on the above, remarks that "notwithstanding all the above reservations, renal casts often afford the best and clearest indications of the nature of the changes that are affecting some part of the gland tissue, even though they do not and cannot give any clue to the extent to which the whole of the kidney is affected."

There is a class of neurasthenic cases the most remarkable feature of which is the general malnutrition. Several such under my care never excreted more than sixteen ounces of urine daily, notwithstanding very free water drinking and high colon enemata. The rest treatment availed nothing. Fresh air and good food constituted the best treatment. Repeated examinations by experts failed to discover any other evidence of kidney disease. Undoubtedly the anuria was the result of defective metabolism.

Such cases must not be regarded as allied to the renal inadequacy of Sir Adrew Clark. This condition was described by that eminent clinician as one in which there was no alteration in the structure of the kidneys, and yet those organs are unable to produce a healthy urine, which fluid is generally found to be deficient in solids, especially in urea. The subjects of the disease—if disease it may be called—exhibit a curious inability to repair "damage done to them by either accident or disease: not only do they repair damage slowly, but they are peculiarly vulnerable, and there is an uncertainty as to the results of surgical operations performed upon them." Viewed by the light of the present day, Clark's renal inadequacy is in all probability but the initial stage of an interstitial nephritis.

The cardio-vascular phenomena of interstitial nephritis af-

ford, as already stated, a most valuable means of diagnosing the disease. Time after time have I seen high arterial tension, thickened radial arteries and left ventricular hypertrophy lead the way to the correct appreciation of the renal condition. These phenomena are also of importance in relation to the production of many cases of apoplexy and cardiac failure. While the high arterial tension is often a source of increased cardiac labor and endangers the integrity of the degenerated blood-vessels, its presence must not be regarded as an unmixed evil, for cases of interstitial nephritis which do not have this high tension, according to Broadbent, should be given an unfavorable prognosis. I have observed that the majority of patients with thickened arteries and low vascular pressure are poor subjects for the major surgical operations, the majority of them dying from cardiac asthenia.

Interstitial nephritis is noteworthy for the great variety of nervous phenomena, the prominence of which may take attention from the kidneys, as the *fons et origo mali.* Some of these are toxæmic; others are due to the general fibrosis which is nearly always associated; still others to the increased vascular pressure and circulatory disturbances. The following case is one which has always been a puzzle to me: Mr. W. consulted me May 31, 1891, at the suggestion of Dr. R. T. Wiltbank. He gave a history of albuminuria existing for years. His present trouble began early in the spring, when he found himself unable to partake of any food without vomiting. The physician who was called in prescribed bismuth and morphia, which did no good. He lay in bed for a month or two, and then he got about and resumed the practice of his profession. During the winter he started in with a rheumatic trouble in the arms and legs. His recovery from this trouble he attributed to wearing sulphur in his shoes. Then there came on a numb feeling, which extended up the legs to the knees, and likewise invaded the arms and hands. That in the latter locality became so marked as to make accurate movements of the fingers impossible. At the time of his visit he still complained of this stomach trouble. Nearly every morning he vomited nearly pure mucus. He was decidedly dyspnœic

during conversation, this symptom having appeared about five or six weeks before. He was subject to a severe tremor, which came on under any excitement, but this I never had the opportunity of seeing. He had not had any headache of late, although for a number of years he suffered from neuralgia. The movements of the hands were decidedly inco-ordinate. He could not perform such simple movements as buttoning his clothes, and he could walk only with the aid of a cane, and that with difficulty. There was static ataxia, with eyes closed. The heart-sounds were normal but for an accentuation of the aortic second sound. Pulse tension was increased. His face was pale and waxy. His urine gave a specific gravity of 1010; albumin one-tenth of one per cent. by Esbach's albuminometer. The dynamometer grasp of the right hand was 35 degrees; the left also 35. He was right-handed. The treatment consisted of as nearly absolute rest as possible, a strictly vegetable and milk diet, and glonoin 1, one drop four times daily, and nux vomica, phosphorus and arsenic, according to indications from time to time. Improvement though slow was steady. The ataxic gait had nearly disappeared by October 1, when the patient returned to his business. He continued performing most arduous duties for three years without any return of his symptoms, although the urinary condition remained as at first. After an exciting political campaign the vomiting returned, but was relieved by lavage and rest in bed and remedies. In the midst of improvement he was seized with right-sided hemiplegia, and died within a few days. No autopsy was permitted. I have always believed that the paraplegia in this case was dependent upon circulatory disturbances. Certainly there could have been no organic changes in the spinal cord. Meigs, in his interesting work on the origin of disease, referring to the general fibrosis associated with interstitial nephritis, says that many times he has found this condition invading the spinal cord when there were no symptoms during life to suggest involvement of this organ. I have often thought that many of the paraplegias—ataxic and spastic—observed in patients past middle life were but part of the constitutional condition attendant upon gouty nephritis.

I cannot close without a few words relating to prognosis. Interstitial nephritis is universally recognized as an incurable disease. It must be conceded, however, that with due care its victims may live for years in comparative comfort. In 1882 a case of this disease, with obstinate epistaxis and insomnia, was referred to me for an opinion. I was under the belief that he had long since been dead when he called on me two years ago, at the suggestion of Dr. J. M. Gerhart, for further examination. I have seen other cases in which the albuminuria and polyuria were discovered years back, and who continue in a fair state of health. It must be remembered that the kidneys, like other organs of the body, are capable of performing their functions to a degree in excess of what the system requires; hence they may be extensively diseased without producing serious symptoms, or indeed any symptoms. Failure to recognize this wise provision of nature has led to the framing of unfavorable prognoses not confirmed by the subsequent progress of the cases.

DISCUSSION.

Dr. T. J. Gramm: I am very glad to see that the Doctor, from an altogether different starting-point, has tried to inculcate certain theories which I believe have now become very generally recognized as the correct ones. I was interested in this subject some years ago from a different standpoint and a different starting-point, in endeavoring to fathom the cause of puerperal eclampsia; and in reading up that subject, and all the theories then presented for that very uncertain and fatal condition, I came across some very remarkakle ones which I reviewed some years ago in a little article.

I am specially pleased to note that the Doctor has insisted that uræmia is not a correct term from its etiological significance, and insists, likewise, that toxæmia—toxæmia, we will say, of so-called uræmia—is not due to retention of urea; and this has gradually come to be the accepted view.

There has been a series of experiments made at the University of Pennsylvania by Drs. Hughes and Carter, who have likewise confirmed this view. The most satisfying conclusions that have been published are those by Sammola (you will find

it in the *Hahnemannian Monthly* for November, 1898), a Frenchman, whose views have there been reviewed by some one, and the theory, as I recall it now, is about this way:

It has been found, for example, that women who have nephritis in pregnancy do not always have renal lesions as a foundation for their eclampsia, and those who have renal lesions do not always have eclampsia or renal symptoms, for they are very similar. His theory is, briefly, that there is a chilling of the surface of the body, which interferes with the functions of the skin—a defective oxidization of the albuminoids in the body, as in the demonstrations which were made on dogs in France some days ago: their bodies varnished after being shaved, it interfered with the function of the skin, and they all developed nephritis. The same thing happened in that pageant, which took place in France, where a child was made to wrap herself in gold foil; that child became sick and got a renal lesion. There is, therefore, the same chilling of the surface of the body and defective oxidization of certain albuminoid substances of the blood. These, in their transit through the kidneys, cause an inflammation, and therefore you have nephritis as a secondary state of a process which has started long before it ever reached the kidneys; and in consequence of this oxidization, of this change of albuminoid matter in the blood, there is brought about nephritis, and you are able to recognize the histological or minute pathological lesions in the kidney. All of these experiments have gone to show that the real cause, the real toxic agent, is not urea, and the sooner we drop that word, particularly in the presence of students, the better off we will be as regards thoroughly appreciating the real pathology of cases of eclampsia and nephritis. Therefore, in conclusion, I would say, the other point is still more emphasized: we not only must examine the urine of cases who are sick with uræmic symptoms for urea—it is not the sole and only method for the test of functional activity of the kidney—but we must examine for other substances, as the Doctor has pointed out.

Dr. J. H. McClelland: I simply want to say a word with reference to this paper. It is a very thoughtful paper, and it is a fact that Dr. Bartlett calls attention to, which will be better under-

stood as the days go by, that we should not so suddenly take fright at the appearance of albumin in the urine, nor yet at the appearance of casts of various descriptions; that while the appearance of such symptoms should not make us indifferent, yet it is a fact that in many cases people will survive for years with marked symptoms of kidney disease, and finally make a pretty fair recovery. I have had instances of that kind occur from time to time, and I think it should lead us to make a more guarded prognosis in many cases.

Reference was made to albuminuria of pregnancy. I see of late that there have been some observations with regard to that, which is rather a new field, a diversion in that particular. The observations of somebody—the name I forget—show that albuminuria appears very frequently before there has been any time for the development of pressure. The opinion has been expressed over and over again that albuminuria in pregnancy is occasioned by pressure, and interference with the circulation in and from the kidney. It is a fact that albuminuria will appear in some cases in the very early months before there has been occasion for pressure, and that some other explanation must be found for this condition. Someone has said that it has something to do with the proper action of the afterbirth in its connection with the uterus. These are points that could be studied with benefit to us all.

Dr. R. E. Tomlin: I consider the paper of Dr. Bartlett a very excellent one from the standpoint of the life-insurance examiner. I have known a number of cases that have been rejected by the mere presence of a small quantity of albumin in the urine. On the other hand, I have known cases that have passed where albumin has not been found in the urine, and yet in the course of two or three years the said patients died of interstitial nephritis. I want to say that having had such experiences—some of these cases rejected are still living, in good health, and have asked frequently why I rejected them—still, on the other hand, cases are passed with ordinary examination of the urine, and renal lesions are not discovered.

Dr. C. Bartlett: Dr. Gramm made some remarks concerning the pathology of uræmia in eclampsia, in which he stated

that these convulsions were certainly not uræmic in origin. It is interesting in this connection to note that Dr. Bradford in the experiments in kidney diseases also took occasion to investigate the pathology of eclampsia, and he made a very elaborate chemical analysis of the tissues, the blood and muscles particularly, in order to determine the extent to which the eclamptic patients had uræmia as a cause of convulsive phenomena. The result of this investigation was that he already found urea in excess in the blood and tissues of the eclamptic patient, but in these cases the urea was nothing like as great as he found in certain of his experimental cases, where there were thirty or forty times the quantity of urea in the tissues as a result of kidney disease; and yet where a large quantity of urea was present there was absolutely no convulsive phenomena. He argued, therefore, that eclampsia is not due to uræmia, although he admits that it may be due to toxæmia of some kind. Furthermore, he has injected into the blood pure urea in cases where no man found any disease and has failed to produce the convulsions.

Dr. McClelland takes occasion to remark that the nephritis of pregnancy sometimes occurs too early in the course of the pregnancy to be due to pressure. On this point I can support him by my knowledge of a case in which I was especially interested, and in which in no less than four consecutive pregnancies a most dangerous nephritis set in at the end—or the beginning of the sixth week of pregnancy. This was a case which interested a number of physicians and baffled all; and in the last attack of nephritis—the last pregnancy—it took two years before the patient's albuminuria entirely disappeared. In five years, without pregnancy, the patient is in absolutely good health. This case shows that the current views regarding the rapid recovery from the albuminuria of pregnancy do not always hold good. In some cases the recovery is slow. In this case we can find two causes for nephritis: either the pregnancy induced the toxæmia, and then, in turn, the nephritis, or, as Dr. Mitchell suggested, it was due to reflex nervous causes or vasomotor conditions. Dr. Betts saw the case, and he took the view that it was due to reflex nervous causes.

CLINICAL CASES.

MARY BRANSON, M.D., PHILADELPHIA.

It is not for the individual interest of the following cases that they are reported, as all physicians can relate more serious experiences in their work, but to bring out a few points that have made themselves conspicuous, and that are not satisfactorily explained.

Miss M., in her seventeenth year; white, very clear complexion, rosy cheeks, light hair, blue eyes; residing in Philadelphia, in the western part of the city. She is the only child of her parents, who are healthy and healthy looking. The mother is large, dark and handsome, but when eighteen years of age she worked very hard in a store, ran down in health, had a severe abscess in the left gluteal region close to the perinæum, and this was followed by another one which left a fistula. This fistula continues to the present time, burrowing into the rectum. One abscess, also, during her pregnancy. She has also had an abscess during the past month, which healed kindly: otherwise perfect health. The patient was an entirely healthy baby, but small and white; developed well, good muscular action, though she was always thrown into a violent perspiration by the slightest exertion. Happy, sunny temperament, good intelligence, obedient and reasonable. Never had a severe illness; children's diseases were mild; catamenia at thirteen years of age; normal. She had a sharp attack of tonsilitis two years ago. The recent illness commenced on the 9th of January, 1899, with a severe cold. On the 11th she went to bed; inflammation of the stomach and bowels appeared. The greatest suffering during this time was with her back. Backache was intense, and without intermission for three weeks, causing opisthotonos by paroxysms and jerking of the left leg. This was most singular, like a violent kick, and she would beg to have the leg held, but her father, a strong man, could not hold it by main force. There would be six or eight of these violent jerks in rapid suc-

cession, making the patient scream out; then they would grow gradually lighter, and afterwards the backache would be intensified. In her whole attack the fever was trifling, temperature and pulse never going beyond 100. The thirst amounted to agony; she would shriek for water, and in the instant of waiting for it to be handed to her she would storm and rage because she had to wait even a second. This would occur scores and hundreds of times. Urination very frequent and free. Bowels bad throughout her illness; diarrhœa of free, hurried, whitish liquid; stools sixteen to twenty in every twenty-four hours. Mental condition fresh, dreamy and vague; gradually the aberrations took a more active form. She would doze, then rouse screaming with a wild fright, when it would be hard to hold her in bed. She thought she was being dragged over cobblestones, or that the bed was on fire; that she was going to die; that she was being murdered, and other frightful delusions. She had one attack of violent pain in the side while another physician was in attendance, and it proved to be obstruction of the gall-duct. Abdomen was intensely sore at the time, and always afterward, even threatening peritonitis. During the attack of biliary colic she was thought to be dying; fan-like motion of nostrils, Hippocratic countenance, etc. After this date she was sore all over; she would scream out that her arm or leg was being broken if touched ever so lightly. Emaciation was steady until she looked cadaverous; gray-white color, with hunted expression of eyes, maniacal manner. For three weeks she laid on her left side, being unable to remain in any other position. Disposition became savage; she would not give a civil answer, nor wait a moment for what she wished. Her voice was sharp, thin and high-pitched, with nasal tones.

Little change was seen in her condition from day to day, excepting that the bowels improved under sulphur 200. By March 1st she would have spells of comparatively civil behavior, and suffered less pain, but her mental condition continued bad much of the time. She would waken furiously cross, utterly unreasonable, wanting the most impossible foods, and requiring a half hour to get her composed. A deep cough developed, which, with her wasted condition, pointed seriously

to phthisis. Belladonna did nothing for her, but phosphorus moderated her cough, and she was able to take full nourishment. From this date improvement was steady, and the mental symptoms cleared away, though they were the very last to yield. She is now perfectly well, and a regular sunbeam in the house. A continuation of phosphorus effected the cure, as it took hold of her mental condition as well as all else.

Mrs. P., age about 35 years, one of a large family of fairly good health, the mother of two children. Pale complexion, frail-looking, but seldom sick. Parents surviving and in good health. Intelligent, active temperament, always busy. December 10th she was first attacked with violent rheumatism in shoulder. Prescribed bryonia 200 in hourly doses. In twenty-four hours the fever had risen to 104°; delirium marked, but pulse was only 94, and weak. The third day fever came down to 102°; no delirium; and she says she "feels easy." Bryonia 200. On the 14th, temperature 98°, pulse 88, respiration 28. On the 15th, temperature 105° in the morning, and great excitement; less in afternoon. Bell. 200. On the 16th, although the temperature had fallen to 98° and active delirium had ceased, she was most unhappy, seeing objects recalling a book which she had read, and which she thought did her harm. She felt worried on every subject, and was morbidly conscientious.

For the following three days her mental condition grew steadily worse, although she was without fever, and almost with no suffering; normal temperature, and pulse normal but weak and irregular. Sulphur. On the 19th she took a suicidal tendency; she thought she was giving trouble and had better be out of the way; she could not be trusted an instant alone, and yet of her own free will drew a razor from under the pillow, saying that she took it from her husband's drawer, but felt, in thinking it over, that she would be wicked to use it. The nurses could not account for the razor. Her health gradually improved on belladonna, and later nux vomica, but her mental condition was not right for weeks, and melancholy lasted even months. The kidneys gave no symptoms except an excess of uric acid, with superabundance of phosphates. The mental

strain which this patient had been under was extreme, reduced from affluence to the most straitened circumstances, her husband a nervous invalid, and much in her life to rasp and annoy.

Another patient, good constitution, a widow over 50 years of age, was affected in much the same manner; her melancholy, which followed an attack of grippe complicated with rheumatism, was intense. She had had a heavy mental strain for a year, and two days after her attack she left her bed on account of alarm over a sudden illness in the family. A relapse speedily set in, and she was violently ill for three months, and in the deepest melancholy for three more, crying by the half day, and grieving over people she thought were dead, but who were, in reality, in perfect health. It was after long-continued prescribing and associating her with people of her youth, whom she knew before any of her troubles, that she gradually returned to perfect health.

This patient was not under my care directly, so the remedies were imperfectly known. During the later stages strychnia was the main dependence.

Mrs. E. was another patient who had a severe illness after work, mental and physical, enough for ten ordinary women. She was taken late in June with violent pain in ovarian region, which rapidly spread over abdomen. Temperature went at once to 102°. Bryonia lessened the pain and fever, but her brain was dull; she had to make a perceptible mental effort to answer a question. On the third day she had a violent chill, pain returned, temperature went to 104°, mild delirium. Aconite hourly. July 2d, temperature 102°; the tired feeling of head and prostration of whole body were alarming. Head felt as if falling, if she dozed.

July 3d. Weak and weary from sleeplessness.

July 5th. No special change; cannot sleep; fever less; sees visions; has fancies of the most realistic character. Very bad night. Sulphur 200. Perspiration and weakness almost causing faintness.

July 6th. Another bad night. Discouraged; lies motionless, in a weakening, warm perspiration, but complains of

fatigue; even moving, thinking and breathing are too much exertion. Rhus. Short dozing through the night.

July 7th. Slight gain. Temperature, 100°. Rhus.

July 8th. Severe pain in left abdomen. Lachesis.

July 9th. Less pain and great flatulence and tympany.

July 11th. Aching and tired. Sulphur.

July 12th. Better.

July 13th. Dull and tearful if looked at or spoken to.

July 14th. Poor nights continue. Looks badly. Temperature, 99°, but mentally dull and tearful. Lachesis.

July 16th. Better for four days, then it was necessary to go back to rhus for the intense sense of fatigue.

July 20th. Weak, creepy, nervous, cold sweat, depressed. Arsenicum.

The only remedy from this time was ars. 3; mental condition weak for long time. Tearful either with pleasure or pain. At present writing she cannot use brain any, but lies down weak and weary much of the time, and if trying to plan ever so little, or to remember, she breaks into tears and then into nervous laughter.

Another grippe patient was taken from the very first with delirium out of proportion to the other symptoms. The case was one of an active young girl overstraining in her musical education and in other ways. She did not complain of great suffering, and the temperature was much of the time only 102° and less, yet her mental excitement was so severe that her case was diagnosed by several consultants as acute mania, meningitis and typhoid, respectively. She was removed to the Hahnemann Hospital after the first week, and the havoc she created there will be remembered by more than one physician present. She is now in perfect health, but her mental condition was the last to yield.

Many cases might be added to these; one where, after every attack of grippe (which occurs in mild form twice or three times a year), there is a sequence of several weeks of nervous irritability, tearfulness, and inability to bear the heavy friction of her daily life, which at other times she accepts with perfect serenity.

In each of these cases the striking feature to be brought out is that the mental symptoms so far exceed the febrile action, and do not decrease as the temperature falls. Is this peculiar to grippe? or do they occur simply because of the heavy mental and physical strain that has preceded the attack?

The typhoid element was marked in all, and reported to the Board of Health as such; but can we call the cases true typhoid when we seem able to trace the cause to circumstances of the patient's mode of living and work, rather than to a typhoid germ?

These nerve-wrecks we meet constantly. Are not *they* just as *completely* nerve-wrecks who break by a violent illness followed by a long, tedious nerve-storm, as are the regulation nervous-prostration cases?

DIPHTHERIA.

I. B. GILBERT, M.D., PHILADELPHIA.

In the scheme and sphere of pediatrics diphtheria holds the same position that typhoid fever commands in general practice, and in the wider plan of nosology.

If we eliminate tuberculosis, diphtheria stands second, in some instances possibly first, in the list of diseases that cause every physician the most anxiety in its treatment.

Such it has been from the misty past down to the day-dawn of intelligent pathology, and down to a period touched by our own last decade. But now the treatment and cure of this self-same disease has become a striking and profound vindication and verification of the fundamental proposition of our system of medicine: *Similia similibus curantur.* That this is a fact, and an attempt to confirm it, shall be the purport of my paper.

Although diphtheria is not a disease exclusively of childhood, nor is typhoid fever that of adult life, the overlapping of the line of separation is about equal in both, and more truly so when accurate account is taken of mistaken diagnoses made of the latter in the diseases of children.

The matter of frequency of occurrence proportionately to other diseases, with its serious and often fatal character, stimulates the profession to a constant consideration and discussion of means of correct diagnosis, better treatment, and the collateral problems of prophylactic and sanitary measures and precautions that now play so prominent a part in the proper handling of contagious diseases.

The subject of diphtheria is perennially new, and, under the influence of the impetus of new discoveries in diagnosis, its literature has become voluminous and almost endless. In confirmation of this, I have noted the number of contemporaneous articles given on this disease and typhoid fever in two of the most prominent weekly medical journals—the one of Philadelphia,* the other of New York.†

The Philadelphia journal has thirty-five articles on diphtheria and fifty-two on typhoid. The New York journal treats upon the subject of diphtheria twenty-one times, and upon that of typhoid fever thirty-six times. Incidentally I would say that the subject of tuberculosis is treated seventy-two times in the former and seventy-one times in the latter. As both of these journals close their first volumes with the end of June, 1899, we have here the latest data, and are justified in assuming that these figures closely represent the present relative frequency of these diseases; and they also indicate the hold they have upon medical thought as revealed by these writings, some of them by the best medical minds of the day.

It is seemingly foolish and supererogatory to attempt to emphasize the weighty significance that diphtheria holds in the practice of every one here present, from the youngest member who may just have taken up his life work to the eldest who may be about to lay it down.

But it is not alone as a confirmation of frequency that these figures are given. There are other and more serious deductions to be drawn from this mass of material; for I find that other literature gleaned from different sources, together with this to which I have specifically referred, narrows down to and central-

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* *Philadelphia Medical Journal.* † *New York Medical Record.*

izes around a commendatory or condemnatory discussion of the use of diphtheria antitoxin.

There are some jangling and discordant notes in the diapason of approval; but the nearer we approach the present day, the clearer and more harmonious is the tone of universal accord.

If the digression will be allowed me, I would state that in a previous paper, read before this Society, I made the prediction that out of the evolution of the "germ theory" would grow a universal system of medicine that would include all the present separate systems that are based on scientific grounds, and are composed of an educated membership. The treatment and cure of diphtheria may be the starting-point of this desirable consummation. Like the late Spanish war, which has been the means for the healing of the sectional animosities of our common country, may this dreaded disease play the same happy rôle.

What is the consensus of medical thought and practice? And what is the present status of diphtheria antitoxin? What the sense of this Society is on this subject I have no present means of knowing; but the New York State Homœopathic Society, by its action in the matter of the Collier bill (since passed by the New York State Assembly), recognizes the antitoxins, and, indirectly, favorably endorses them; or, at least, we are fully justified in putting this construction upon the matter, knowing the course they have taken with reference to this bill.

The "germ theory" wave that has been rolling over the medical world has left some permanent effects, and more specific results have been obtained in the investigation of the causes and cure of diphtheria than in any other disease. The presence of the Klebs-Lœffler bacillus in the membrane is absolute confirmation of the diagnosis. This point none will dispute; and it is acted upon by the establishing of municipal bacteriological laboratories, by the free aid of which any physician can have his diagnosis verified or his doubts removed in suspicious cases.

None can controvert the truth that before the discovery and application of this anti-diphtheritic serum the treatment was

largely empirical. The expert diagnosticians at times failed to make a true diagnosis, and seemingly trivial cases developed serious symptoms after a favorable prognosis, and only to be met by a tracheotomy.

The September number of *The Hahnemannian Monthly* contains an extract from an exchange bearing on the use of antitoxin in diphtheria. This is a report of sixty-nine cases, with sixty-two recoveries, in which the antitoxin treatment alone was used.

"Every suspicious case," says the writer, "should receive an injection at once, rather than wait for a bacteriological examination. If the case is one of streptococcus infection neither good nor harm will be done, and if it proves to be a case of Klebs-Lœffler infection it will probably be promptly cured."

I will also quote some of the conclusions of a paper read before the New York Academy of Medicine. "In diphtheria alone has serum therapy proved a complete success." "The large reduction in the number of cases of diphtheria in New York City was probably due to several factors, *e.g.*, the general use of antitoxin (and) its employment as an immunizing agent."

The New York Foundling Asylum reports for 1898 the loss from diphtheria at 14 per cent.

Of our own Blockley, several years ago, the statement was made that *all* foundlings *died*.

I will not quote statistics. Our journals are filled with them. They are open to all who wish to enter into an investigation in this line.

The untoward effects resulting from the use of this antitoxin can be attributed to lack of skill in preparing the remedy during the time of its early use. The serum made to-day is infinitely superior to that first produced. This is the history of every remedy. The final results prove the truth of a theory.

If the present diphtheria antitoxin be not a true remedy, none can deny but that it is a bright and luminous finger-board that points the direction for seeking the true cure in this disease, and possibly many others.

Diphtheria antitoxin, with its complement, the O'Dwyer

tubes, and the proper training for their skillful manipulation, comprehend the latest and most successful treatment, and if I have succeeded in turning attention to it by reading these notes, the purpose of this short paper has been accomplished.

DISCUSSION.

Dr. A. P. Bowie: This paper, if I understand it, advocates the use of antitoxin in diphtheria. I would like to ask what we will do with that chapter in the history of homœopathy where we have had good success in treating this disease without the use of antitoxin. Those who choose to use the antitoxin can do so. For my part, I have had very good success from homœopathic remedies, and I do not hesitate to use them. This being a homœopathic medical society, I do not think that we should endorse antitoxin *in toto*. I think it might be used in some cases, but there are plenty of cases that we can cure with our homœopathic remedies, and there is no member of the profession here but who can testify to the same.

Dr. R. E. Tomlin: The only criticism that I have to make on this paper or any other regarding antitoxin is failure to give distinct indications when and where and how much should be used. In general practice I have had some cases of diphtheria. I have myself never used antitoxin, although I had a child very ill several years ago. I had a number of cases, and a friend of mine saw these cases. He used antitoxin, and they all recovered. I have succeeded in some cases of diphtheria which I have treated by the use of local remedies, together with the indicated homœopathic remedies, as nearly as I was able to do, and successfully. I am not opposed to antitoxin, but would like to hear clear and specific indications from these men who use it. The paper is worth much, as it draws out the opinions on the subject by a man who has had practical experience. Dr. Gilbert has had extended experience in this line. He is able to speak, and were it not for the brevity of his paper in presenting it to the Society, I presume he would have gone into it more specifically. But I think, before a Society of this kind, we want to make use of anything that will benefit our patients—homœopathy first and always preferred. If we have

here something that will save a life, like the salt solution, we ought to use it, but we ought to know where and how much to use.

Dr. A. B. Lichtenwalner: If you will refer to my paper of last year, you will there clearly see the indications for its use. In the beginning of the use of antitoxin I used large doses, taking large quantities of serum. It is manufactured in small, concentrated doses of 1000 units, and I use only one injection. If we know that we have a good agent, I think we certainly should use it. If I were to use remedies I would speak of echinacea, but antitoxin is the remedy for diphtheria.

Dr. D. C. Kline: I have heard that antitoxin has an action on the kidneys. I have never seen the need of it. The carefully indicated homœopathic prescription has saved me the loss of a child in diphtheria, and I have never felt called upon to use antitoxin. If I did, I would use it.

Dr. A. P. Bowie: Personally I don't wish to discuss the paper. I discussed Dr. Lichtenwalner's paper on this subject —Antitoxin—in the last meeting at Pittsburg, and at that time expressed myself as being very favorable to its use. I have had no reason to change my mind. I have used it in several hopeless cases, that is, cases that were termed hopeless by myself and counsel. Two cases that were in a moribund condition when the antitoxin was injected were the most wonderful cases I ever saw as regards rapid recovery. I used the antitoxin, and in less than twenty-four hours the toxic effects of the diphtheria wore off. The membrane was there for several days, but the children were in good condition, sitting up in bed and playing with their playthings. I would consider myself criminally negligent should I have a case of diphtheria and not try to use the antitoxin. I went through a long epidemic with diphtheria and was pleased with its use.

Dr. J. W. Coolidge: I began to use antitoxin early, mostly in bad cases, in consultation cases, but I now hasten back always to my office and get my antitoxin immediately if I suspect a case. I think we should give it as soon as possible in early cases.

Dr. P. S. Duff: Carbolic acid is the remedy that will enable you to cure many cases.

Dr. J. W. Coolidge: I have had a great many bad cases and I know pretty well the value of the ordinary treatment, but it failed me in many cases. I believe that antitoxin has saved every case in which I used it. When you have one case and another arising in the same family, you will see the beautiful results of antitoxin in its inception, in only giving one dose.

Dr. I. G. Shallcross: Reference was made a short time ago to the effect of antitoxin upon the kidneys. Two years ago I treated a number of cases, or assisted in treating them, with Dr. Paxson, in which antitoxin was not used. There were five in the family down with the disease, and they all recovered except one, who died two or three months later from a kidney trouble, and that kidney trouble could not be placed to the credit of antitoxin. As far as my experience goes, antitoxin is the most valuable remedy in the whole category of treatment. It should be used early, as soon as diagnosis is made. I do not believe in using it on suspected cases, but making our diagnosis complete first. It does not take very long to make a microscopical examination, and when you are sure that diphtheria is present, then antitoxin should be used. And even in cases where we felt the patients were almost at death's door, where we felt that the last hours had come, antitoxin was used with very good results. But I think the proportion of good results is in favor of the use of antitoxin, and it should be used as early as possible.

Dr. I. B. Gilbert: I have great respect for the remedies of the homœopathic materia medica as used in diphtheria, but I have just a little bit more for antitoxin. I have been interested in my practice, and my experience teaches me that if I am still going to continue I must use it.

NUTRITION.

L. B. GRIFFITH, M.D., PHILADELPHIA.

We spend much time in studying therapeutics and pathological conditions, but I fear we do not study sufficiently the process by which the body is nourished, especially in diseased conditions.

There are thirteen chemical elements uniformly found in the body, and ten more are occasionally found. Several of these exist in very small proportions. Several others exist more abundantly. The four most abundant and most important are oxygen, hydrogen, carbon and nitrogen.

These elements form compounds which, as they occur in the structure of the various tissues, have the following characteristics: 1. Although the elements are few in number, their molecular arrangement is very complex. 2. Their compounds are comparatively unstable, and are readily converted in the body or by chemical analysis into other forms.

All food is composed of combinations of these simpler chemical elements which, for the most part, must be subjected to alteration in the body itself to prepare it for assimilation by the tissues. The *nutrition* of the body, therefore, involves several distinct processes, viz.: 1. The secretion of digestive fluids and their action upon food in the alimentary canal. 2. The absorption of the ingredients of the food, when digested, into the blood and lymphatic vessels. 3. The assimilation of the absorbed nutritious products by the tissues. 4. The elimination of the waste material.

The material or food to carry on nutrition may be selected from a great variety of substances, but we may divide them into three general classes. 1. Organic nitrogenized substances belonging to the animal kingdom, and vegetable nitrogenized substances, such as gluten and legumine. 2. Organic non-nitrogenized substances, as sugars, starch or fats. 3. Inorganic substances, as water, sodium, chloride, calcium, phosphate, etc.

For a man to be supported in a healthy mental and physical condition, it is necessary for him to partake of all these substances in varying proportions. The standard diet for a healthy adult male at ordinary work should be about in the proportion of one part of nitrogenized or animal food to three or three and one-half parts of non-nitrogenized or vegetable food.

I would briefly recall that the five digestive fluids are all alkaline except the gastric juice. That the digestion of non-nitrogenized food begins in the mouth; that the gastric juice acts chiefly on nitrogenized substances, and that it digests the connective tissue and sarcolemma of meat, reducing it to a pulp, but not completely digesting it, but passes it on into the duodenum, where it comes in contact with the alkaline pancreatic, biliary and intestinal juices, where its digestion is completed. The pancreatic juice is the most active and comprehensive digesting fluid of the body. It not only acts strongly on nitrogenous substances, but it possesses the distinct advantage of digesting fats and carbohydrates by a ferment called steapsin, which acts in either acid or alkaline media. It also acts stronger than saliva, for it digests the raw starch and cellulose which is eaten in such vegetables as celery, lettuce or radishes, and in fruits like apples.

The chief action of bile seems to be to aid in the emulsion of fat. When bile is absent, the fatty food may decompose in the intestine and develop gases and foul odors. The intestinal juice acts on starch, converting it into glucose, and also acts on coagulated albumin and cooked meats.

Yet we must remember the general process of digestion is accomplished by the combined as well as the successive action of the different digestive fluids. The act should be viewed in its ensemble, rather than as a process consisting of several successive and distinct operations, in which different classes of alimentary matters are dissolved by distinct fluids. The food meets with the gastric juice after having become impregnated with a large quantity of saliva, and it passes from the stomach to be acted upon by the intestinal fluids, having imbibed both saliva and gastric juice.

With these few general remarks we will hurry on to what is

more practical to the members of this Society—nutrition in diseased conditions.

A great number of diseases are caused by improper diet. Such as: 1. Insufficient food. Perhaps the most frequent trouble we meet with under this heading is the insufficient use of water. Continued deprivation of water causes the blood, by virtue of its self-regulating power, to withhold fluid from the kidneys and digestive glands. The digestive secretions, therefore, become less fluid, of more intense reaction, and greatly diminished in quantity, and this interferes or retards their normal action upon the ingesta. The absorption of fluid through the walls of the alimentary canal is retarded, and nutrition suffers in consequence. The bowels become constipated.

We are liable to forget that the excrementitious products which generally are soluble in water are dissolved by it in the blood, are carried to the organs of excretion, and are discharged in a watery solution from the body. An insufficient supply of water interferes with this process, and the effete matter retained in all parts of the body seems to act like a poison, and causes headaches, rheumatism, lassitude, neurasthenia, etc.

2. Overeating or overdrinking. Temporary overeating may apply to the excessive consumption of a mixed diet, or of particular articles of food. The most frequent diseases arising from overeating are dyspepsia, acute gastro-enteritis, or diarrhœa. Chronic overeating will cause such diseases as obesity, gout, lithæmia, oxaluria, and the formation of renal or vesical and hepatic calculi, biliousness and constipation, with all the usual attendant symptoms.

Overdrinking, except of alcohol, is mainly confined to the excessive use of tea or coffee, which results in insomnia, cardiac palpitation, and various neuroses.

3. Food, in itself wholesome, but which is injurious because the ingredients are not properly balanced, will cause disease, such as anæmia from lack of meat or other animal food; scurvy from preponderance of salt meat and fish and lack of fresh fruits and vegetables; rickets and scrofula from errors of infant feeding; acne or eczema, constipation or rheumatism.

In the management of all forms of disease a suitable adaptation of the food to the altered state of the diseased organism is of the highest importance; and we should pay especial regard to the state of the digestive and assimilative organs as influenced by existing pathological processes.

In many cases the eliminative processes are also gravely disturbed, and the exhibition of food containing much that cannot, under the circumstances, be utilized, leads to still further eliminative difficulties.

In diseases of the digestive organs we must ever keep in mind this disability, and remember that the essential conditions, alleviation and cure of such disorders, may be the temporary withdrawal or limitation of food.

In febrile diseases, while tissue waste, and therefore the demand for food, is augmented, the capacity for digesting and appropriating nutriment is greatly impaired.

All febrile states are accompanied by an increased waste or consumption of the tissues of the body, so that there occurs a considerable loss of body weight, usually proportioned to the intensity and duration of the fever. This loss is chiefly albuminous tissue.

The whole of this loss is not due to the febrile process alone, but a portion of it is due to defective nutrition caused by the coincident disorder of the organs of digestion and assimilation which almost invariably accompanies fever.

Not only is there absence of appetite and indisposition to take food, but if food in any considerable quantity is given, it fails to be digested and assimilated, and only serves to intensify the febrile process and increase the discomfort of the patient. This usually results in an excessive excretion of urea, which is eliminated in the urine, but which may, for a time, accumulate in the blood.

Bauer and Künstle have observed in typhoid patients the fact that by a due "supply of albuminous food to a fever patient a saving of albumin in the body may be effected; for though the excretion of nitrogen is increased, the loss of the same element from the system is reduced." And Bauer further says that while the loss of albumin may be lessened it cannot be entirely prevented in highly febrile states.

So we should endeavor, in treating febrile cases, to utilize food to the greatest extent that is safe and possible for the purpose of checking the waste of tissue which is associated with the febrile progress.

We should be careful to allow no food that cannot be readily absorbed and assimilated; for if we overlook the fact that the functions of the digestive organs are gravely impaired during fever, and if, in consequence, we give food that the patient is unable to assimilate, this undigested food will decompose in the stomach and intestinal canal, and cause irritation of the gastro-intestinal mucous membrane and increase the fever.

If the febrile attack is an acute and short one, there is no need for any anxiety as to the consumption of much food, unless old age or previous debility affords a special indication for actively supporting the bodily strength.

The food of fever patients should be in the fluid form, such as can be readily and immediately absorbed—and it should be given in small quantities and at short intervals. Yet we should remember that most fevers have their periods of remission or intermission, and that during these periods the digestive organs are more capable of doing their work.

Sometimes it is necessary to make a distinction between gastric and intestinal digestion. When the appetite and ability to take food are lost, they fail first with regard to meat, which is, so to speak, the specialty of the stomach, and next in regard to bread.

Patients are then reduced to the use of liquid food—milk, beaten-up eggs, gruels, jellies, beef-tea, and the like. In this case the stomach becomes almost simply a conduit to pass on the liquid food to the duodenum.

Milk is the food most suitable for fever patients. It is a complete food; that is, it contains all the elements needed for the nutrition of the body—albuminates, fats, carbohydrates and salines. But milk is sometimes very distasteful, and sometimes does not agree if taken in its original condition; yet this can usually be overcome by some special preparation. It can be previously boiled; should often be diluted with from a tablespoonful of water to an ordinary-sized glassful to half-and-half;

or equal parts of milk and Vichy, apollinaris or soda-water. Milk thus diluted can often be absorbed when pure, undiluted milk would be undigested. As a fever patient necessarily requires much water as a beverage, we need not hesitate to freely dilute his milk.

We can separate the curd and give the patient the whey; this may be made more nutritious by adding strong beef-tea or meat-juice, or by the addition of the yolk of an egg, previously whipped up, with a little hot water and strained.

Eggs, also a complete food, may be used in febrile diseases. They are best administered beaten up with *hot* water and strained, added to a little light broth or clear soup.

Valuable foods in febrile diseases are the various meat infusions, juices, extracts, broths or soups.

Practical experience seems to show that albuminous and gelatinous fluids, when they are not disagreeable to the fever patient—and it is an important matter to consult the inclinations and disinclinations of the sick—tend to support the bodily strength and lessen the risk of exhaustion, and we may therefore recommend, in such cases, either well-made clear soups and broths or the stronger beef essences and beef-tea.

The best beverage for a fever patient is water or something consisting almost wholly of water; much water is needed not only to replace the loss of water from the heated body, but also to provide a necessary solvent medium, to dissolve and carry away the waste products of the increased metabolism of the tissues.

Lemon juice scalded and strained and added to water just sufficient to make it tart is often a very refreshing and beneficial drink.

Our patients' nourishment should be served on the best dishes the house affords; they should be clean, with clean tray and napkins.

Lukewarm food is not palatable; consequently, it should be served either hot or cold.

The smell of food cooking should be kept from the sick room —all food not eaten by the patient and all soiled dishes should be removed from the room as soon as possible after the meal is finished.

If possible, a cheery conversation should be carried on while he is eating.

If patient is able to sit up in bed to eat, the nurse should see that he sits comfortably, as an uncomfortable position will have a marked effect on the appetite, which will be satisfied much sooner if uncomfortable.

RHEUMATISM.

WILLIAM M. GRIFFITH, M.D., PHILADELPHIA.

My apology for presenting this old subject is that the disease is not obsolete. Rheumatism is an affection mostly of fibrous and muscular tissues. One muscle or one sheath of fibrous tissue may be the extent of an attack, or the whole muscular system may be more or less involved. Rheumatism may manifest itself in slight twinges and pains, accompanied with soreness and aching, or the pain may be so violent and severe that there is scarce a moment of relief, and every movement is attended with great suffering. The attack may be relieved in an incredibly short time, or the attack may continue for an indefinite time. Rheumatism is not often dangerous to life nor fatal in its termination, yet many cases pass a life of misery as a result of chronic heart complications or joint-enlargement. Rheumatism at times comes suddenly and insidiously, as has been witnessed in attacks of torticollis, pleurodynia, omodynia and lumbago. A man bending to wash his hands at a hydrant after his day's work was done had a severe kink in his back when attempting to straighten, which continued for two or three days. Wry-neck may not only come suddenly, but repeatedly, much to the torment of the person afflicted.

In an attack of acute articular rheumatism, or rheumatic fever, there is generally, though not always, a feeling of debility, and often chilly sensation, followed by heat, thirst and fever, frequently accompanied with pain and swelling of the joints; the parts may be reddened, sore to the touch and painful

from motion, yet the patient has a restlessness which compels a change of position. Sweating may be profuse without amelioration, the urine scanty, specific gravity high and loaded with urates, and uric acid crystals are frequently found. An odor is occasionally perceptible, probably dependent on the sweating which is caused by the irritating influence of the acid. Food is disgusting while the fever continues, and the tongue is heavily coated with a dirty white fur. Usually there is much loss of sleep and a dread of the tedious night hours.

Acute rheumatism has a tendency to shift from one part to another; for instance, if one wrist, elbow or shoulder be the seat of the disease, it may shift to the opposite limb, or shift to the lower extremities. Frequently, when the attack appears to to have subsided, a relapse may occur, and each part be attacked the second time, rarely the third time.

While it is seldom that rheumatism proves fatal, yet the patient is much reduced in strength, and often in flesh. It is usually entirely cured if no complications have arisen, although many persons are liable to subsequent attacks.

The serious part of an attack is in the complications which are apt to attend its progress.

Among these may be mentioned high fevers, cerebral involvement, and occasionally choreic symptoms. The most frequent and dangerous of all the complications are those affecting the heart. This organ should be carefully watched. Any form of rheumatism may develop heart trouble, and it is important to make frequent examinations. Some practitioners insist on a thorough examination of the heart at each visit. We may hear murmurs in some cases without cardiac disease. Endocarditis and pericarditis are almost invariably of rheumatic origin, while myocarditis is occasionally so.

It is a satisfaction to be able to distinguish between the different heart symptoms. On general principles we find both endocarditis and pericarditis have murmurs: the endocardiac murmurs show a soft, blowing, systolic sound—a bellows murmur—and grow in intensity each day, in its first stage, and more perceptible over the valve involved. In pericarditis the murmurs are more of a thrill or friction-sound, and more

superficial, designated as harsh, rubbing, creaking, or grating sounds.

Myocarditis is rarely found in connection with rheumatism. I can only recall two cases. These cases, at the onset of the first perceptible symptoms, were not under treatment. They were attending to their usual duties, and became suddenly weak without, to them, any apparent cause. Both were away from home, and could not proceed without help. This great and sudden weakness in these persons with a rheumatic history could only be accounted for by a failure of the heart-muscles. To me the heart-sound seemed muffled, and extended over a greater area than usual. Dyspnœa, especially on slight exertion, is a symptom of each of these heart affections, and with endo- and pericarditis we have fever, pain and palpitations. It is the liability to these inflammatory heart affections that causes special anxiety during the earlier stages of an attack of acute rheumatism, when it would appear they are more apt to occur. The risk of cardiac complications seems to be greater the younger the subject, and often the foundation of organic heart disease is laid in early childhood, when rheumatism is by no means uncommon. The most danger of heart complications is during the first week of an attack.

Causes.

The cause of rheumatism is largely conjectural. We conjecture that the blood contains a constituent that is conducive to this disease. If it is not a new product, there is an excess of one of the normal constituents, probably urea. Why this excess? We again conjecture that it is caused by a morbid state of a nutritive function or by an excess of food—more than is necessary for the proper nourishment of the body. Food which has not been oxidized becomes a fruitful source for urea in excess, and this excess is likely to be deposited in some part of the system, mostly in the smaller joints.

Again, we conjecture that it is due to exposure; it is well known that cold and dampness will cause rheumatic symptoms. Many of the soldiers in the recent war with Spain suffered from rheumatism on account of exposure, whether on native or

foreign soil. There is a rheumatic tendency in many persons, some contending that it is hereditary, and men more susceptible than women, probably due to greater exposure. Temperature changes, when sudden and decided, are apt to cause rheumatic troubles. Sudden changes are favorable for contracting the disease. In women, chronic rheumatism is favored by the influences of the critical age.

Goodno says: "The most popular hypothesis is that which attributes the disease to the action of micro-organisms. Such organisms have not yet been identified, but we are justified by the analogy which exists between rheumatism and many infectious diseases in hopefully expecting that it will ultimately be accomplished." The only support of this theory that I can give is that I have frequently noticed rheumatism of the wrists and ankle-joints in the course of scarlet fever. Others see a resemblance of rheumatism to malaria, but do not consider the specific agent in these affections as one and the same, but allied in nature and mode of action.

Rheumatism and allied symptoms prevail so extensively, both as regards territory and numbers, that it offers a valuable field for the manufacturing pharmaceutical profession to prepare nostrums, so that, according to their advertisements and the positive assurance of their agents to the medical profession, they have found a remedy or a combination of remedies that will cure every case. In fact, many chemists, druggists, physicians, and often the lay people, have certain remedies, lotions and invaluable preparations for the positive cure of this disease.

It is not the province of this article to condemn any plan or call in question any remedy that will successfully combat rheumatism in any of its various phases, but rather to indulge the hope that we shall have a free discussion, and all give us the benefit of their experience in treating this disease. Rest is always indicated, even in apparently light cases, and should be insisted on as early in the attack as possible. Rest in bed with the joints wrapped in cotton or flannel is important. Some cases are benefited by a firmer appliance, such as adhesive plaster or a plaster-of-Paris bandage. The former method is to

be desired if the parts perspire freely, necessitating frequent changes and frequent washing. Recently, ice-bags applied to rheumatic joints has found favor among some practitioners, and excellent results have been reported.

I have suggested a silk handkerchief figure-of-eight bandage for an inflamed joint; tie it comfortably tight and leave it on over-night, or longer, if desired.

The nursing requires skill, for the patient ought to be kept clean, in spite of the pain in moving, and performed in such a way as to avoid chill. As each arm is wrapped by itself, so, in many cases, each leg should be wrapped by itself; then one limb can be changed—cleaned and dressed—without disturbing the other, and the management of the urinal and bed-pan will be much easier. The remedy internally taken demands from the prescriber his best efforts. Selected according to the totality of the symptoms and the pathology of the condition, such a selection is, according to my experience, far superior to heroic measures and crude drugs. Let us all, as physicians, be proud of the resources at our command, and endeavor to find the remedy appropriate to each case.

Aconite probably takes the lead; it has been successfully used in the first stage, middle stage, and late stage, not only in young subjects, but in old persons. It calms the fever and awakens the latent energy by acting on the vaso-motor centres. Restlessness and fearfulness disappear, the heart becomes quieter, and relief is apparent.

Bryonia is suitable in rheumatic fever, pains and soreness in joints, with or without swelling; parts are stiff, and usually aggravated by motion. Low dilutions—0, 1x or 2x—give the best result.

Ferrum phos. acts much like aconite. Great soreness is a prominent symptom. It has a beneficial action in endocardial complications.

Rhus tox. Symptoms ought to be revised, for it often disappoints when used for rheumatism due to exposure and dampness. There is a stiffness and soreness of the muscles, feeling as if overworked. Must move in spite of pain; worse at night.

Cact. grand. has great lassitude, unaccountable weakness until heart is examined, oppression, constriction, palpitation.

Pulsatilla, cimicifuga, belladonna, chamomilla, sulphur, caulophyllum, and many other remedies might be mentioned.

Recently I have used, according to Goodno's suggestion, colchicine (Merck's), one grain dissolved in one ounce of alcohol. Of this solution put 12 or 15 drops in about 4 ounces of water. Take 2 teaspoonfuls every hour, extending the time to two hours when better. Some patients are very sensitive to its action, and complain of a disturbance in stomach or bowels, which is an indication that it is doing its work, and the remedy must be stopped for a time, but afterwards continued in smaller doses. It often quickly relieves the swelling, modifies the pain and controls the fever.

A saturated solution of salicylate of sodium in 20- to 30-drop doses in water, taken three times a day, is often given in cases that are beyond the acute stage. Salicylates are not borne by everyone alike; the dose one can take with benefit may in another cause nausea, headache, disturbance of the sight, vomiting, ringing in the ears, and deep, rapid breathing. The remedy should be stopped at once, or the dose greatly reduced. Often the good results obtained from the use of the salicylates do not equal the evil effect in the alimentary tract alone, and where there is any renal trouble should not be administered at all.

I believe the use of an opiate is justifiable for the relief of severe pain, and possibly gives much needed rest and sleep. Recently, instead of morphine for this purpose, I have used chloral hydrate in 5-grain doses, repeated for a few times every two or three hours. If the uric acid is neutralized, the temperature becomes normal and joint-symptoms relieved in a few days, we can hope for a quick convalescence, and less likelihood of cardiac complications.

"The coal-tar preparations, such as antipyrine, acetanilid, and phenacetin and their compounds, will often relieve pain, reduce temperature, and make the patient comfortable for the time being, but do not seem to have any beneficial effect upon the progress of the rheumatism itself."

So far nothing has been said about external medicinal applications. Many lotions used for this purpose seem to me not only of no use, but injurious, especially such preparations as contain ammonia, turpentine and camphor. In sub-acute or chronic rheumatism, or in gouty diathesis, external applications might be used to an advantage. I have known the local use of laudanum to relieve temporarily. I have never used nor recommended blisters. Baths of alkaline or sulphur water have obtained great reputation for the relief of various forms of gout and rheumatism. Strict attention to diet, systematic living, and careful habits in a suitable climate, are of great importance in the management of rheumatism and gout under any conditions.

THE TOPICAL APPLICATION OF ANTISEPTICS IN DIPHTHERIA.

B. B. GUMPERT, M.D., PHILADELPHIA.

Last fall I was informed by Dr. G. E. Bonnet, a district physician, of a case of diphtheria he had seen that was cured by the smoke from burning tar and turpentine. This was not a new discovery, for I found in an old newspaper an account of a like cure; but the use was attended with so large an amount of smoke that its application did not take to any extent. I have met with no further notice of its use.

The mention of his case led me to think whether the application of non-toxic antiseptics could not be substituted for the smoke cure, and after long thinking I concluded to try it on the next case that presented itself.

On April 16th last I was called to a case—as full, ripe a case of diphtheria as I have ever had in forty-five years of practice. The patient was a child 8 years of age, whose pulse was 140, temperature 103½°, with tongue coated, breath foul, throat inflamed, tonsils swollen, with two patches of exudate as large as nickels adherent; child very restless, refusing all food. In this condition I found her at 9 P.M.

I made an antiseptic wash, and with a small gum-ball syringe (this I find better than swab or brush) injected mouth, throat, and nose. The syringe contains about 1½ ounces, which is sufficient for one application. I left powders to be given every two hours, the wash to be repeated every seven or eight hours.

The next morning, accompanied by Dr. Bonnet, whom I had informed of my treatment, I called at the house, and found the child crying for food. The mother informed me the fever had left four hours after the first dosing. I found pulse 100, temperature 100°, throat not so red, exudate still adherent. I gave the case to Dr. Bonnet, and instructed him how to use the syringe, and to report to me the next day.

The false membrane was off twenty-four hours after my first visit; the child was all right in a few days; the quarantine only lasted six or seven days, by which time the child was well.

As "one swallow does not make a summer," I received from Drs. Bonnet and Leedom reports of their cases, most of them in tenement-houses and slum districts, and in all cases there was no spread of the disease, and all were speedily cured by the above-mentioned treatment. By using a mild gargle, the families attending the sick remained immune.

The remedies I used were, for the wash, a 2 per cent. or 3 per cent. of "lysolum purum" or "lysol," a most satisfactory antiseptic and non-toxic (a 2-dram vialful is my measure, to 2 ordinary tumblers of warm water, about 12 ounces), and for the powders I used 1 grain 3x trit. of biniodide of mercury intimately mixed with 10 or 12 grains of pulverized *cane*-sugar. (Take 1 dram of the 3x trit. biniodide and 1¼ ounces of the cane-sugar, mix intimately in a mortar, and divide into 60 papers.

School-children, I think, would be protected by a gargle of 1 per cent. of the solution before school and at bedtime.

RHEUMATISM.

A. B. LICHTENWALNER, M.D., PHILADELPHIA.

There are three clinical phases of rheumatism.

Acute Rheumatism.—Acute rheumatism commences abruptly, occasionally with a distinct rigor, succeeded by a sense of weakness and general malaise. It is also accompanied by diffuse aching pains, sudden temperature rise, and by involvement of one or more of the larger joints, which become painful, swollen and very tender. At the same time there is free perspiration of a very disagreeable odor. Occasionally there is redness of the joint-surface, and the inflammation tends to shift to other joints. This invasion of fresh joints is not always accompanied by diminution of the inflammation of those already affected. Febrile symptoms persist, although the temperature chart may show fluctuations: the pulse and respiration are accelerated. The urine is highly colored, and, on standing, precipitates a copious deposit of urates. The specific gravity is as high as 1032, and contains an increased quantity of urea; the bowels are constipated; the tongue is coated and the appetite capricious; perspiration trickles down the face. Even the weight of the bedclothes cannot be tolerated. In agony the patient cries out for relief.

When uninfluenced by treatment, the acute symptoms generally last for two or three weeks; and during this time there is marked tendency to cardiac involvement, which constitutes the chief danger. When once the heart is affected, it is apt to remain permanently damaged, and in a few cases may prove fatal.

Subacute Rheumatism.—This is a milder type. It comes on even more insidiously; fewer joints are affected, and they show the same tendency to shift and vary their seat, although the constitutional condition is not so distressing. There is, however, the same acid perspiration, only it is markedly diminished

in quantity. The heart is apt to suffer in this, as in the acute form, but not so frequently.

Chronic Rheumatism.—Many ills to which human flesh is heir are largely ascribed to rheumatism. Chronic rheumatism, however, is a milder form of the subacute variety, in which there is not sufficient local inflammation to confine the patient to bed. Just as the acute becomes subacute, so the subacute reaches the chronic form, and is characterized by the occurrence of pain, obstinate and shifting in character, affecting joints, muscles and fibrous attachments, influenced by the return and departure of wet weather—a troublesome ailment which frequently lasts off and on for months—the continuance of which is often the foundation of future cardiac trouble. By personal and family history, the seat and character of the pain, and by occasional, though slight rise of temperature, chronic rheumatism may be differentiated from gout, arthralgia and neuralgia.

Diagnosis.—Acute and subacute rheumatism is apt to be mistaken for acute gout, acute rheumatoid arthritis, pyæmia, gonorrhœal rheumatism and syphilis.

It is chiefly by the successive involvement of many joints, and especially the larger ones, that rheumatism is distinguished from gout. Rheumatic fever is further differentiated by recurrent and abundant acid sweats. If a person is morbidly sensitive to damp and cold, and if this is shown by the development of pains in the joints and fascia, rheumatism may be suspected; but if, on the other hand, there is sensitiveness to food, and if certain articles of diet produce joint-pains, then gout may be suspected. Pyæmia simulates rheumatism, although cutaneous abscesses are common, and, after the joint-inflammation has subsided, its integrity is usually impaired. Acute synovitis may be questioned, if one joint swells after exposure and possible traumatism, while in acute rheumatism the joints become implicated one after another, and the acrid sweat associated with severe constitutional symptoms makes the nature of the case clear.

Syphilitic joint involvement is characterized by pain and tenderness, but there is very little acute inflammation, and a history of venereal infection may be elicited. In connection

with this subject, it is interesting to learn that the pains of syphilis generally abate under the liberal use of Hg. and the KI. In gonorrhœal arthritis, co-existing urethral inflammation points to the origin.

The Duration of Rheumatism.—Next to pain and heart complications, one of the most noticeable features of rheumatism is its prolonged duration when unchecked by treatment. It is not uncommon for the disease to last for months, while in other cases its duration is exceptionally short; so that rheumatic fever is active for a long period when uninfluenced by medication. "How long," says MacLeod, "a case of acute rheumatism of medium severity might endure if left to itself, I am unable to say; but with the common methods of treatment, probably five or six weeks may be about the average duration of rheumatic fever."

The consensus of opinion is a unit in ascribing to acute rheumatism a mean duration of several weeks. The duration of the disease is determined by the presence of pain, and its characteristic symptoms continue so long as the rheumatic poison is exercised on the joints. The temperature may decrease and the pulse fall, perspiration may cease, but so long as pain remains in any of the joints the patient is not convalescing and a return of all the bad symptoms may again appear.

The temperature rises and falls with the decrease and increase of pain and swelling in the joints, but rarely assumes its normal quality until the joint-pains disappear. This grafting of the chronic into the acute form explains the long duration of those cases in which acute rheumatism is said to have lasted for several months. Such cases commence as acute rheumatism, gradually passing to subacute, and still more gradually into the chronic form. So insensible are the gradations by which the one form runs into the other, that with the thermometer it is difficult, and without it impossible, to say exactly when acute becomes subacute and subacute chronic. It is seldom, however, that a case remains acute for more than three weeks. It may be acute for that time, subacute for three or four weeks more, then gradually and without cessation of pain pass into the chronic form and so remain for many weeks. While the

attack may be continuous, it is not essentially acute in character.

The Location of Rheumatism.—This malady is generally believed to have its seat chiefly in the fibrous and serous tissues, from the fact that the rheumatic poison is found to become active almost exclusively on particular organs in which these tissues predominate. The joints, muscles and heart are the parts usually involved. Then, there are many joints which share a comparative immunity from the disease; the small joints of the fingers are not often affected: the small joints of the toes still more rarely, and one seldom meets with true rheumatic inflammation of the articulation of the lower jaw or the ribs, and yet all these joints have ligaments and fibrous and serous tissues; so that only a part of these tissues show a special susceptibility to the action of rheumatic poison. We cannot fail to see that the seat of rheumatism is not fibrous in general, but such fibrous tissues as are engaged in controlling and regulating the free movements of the body—not serous textures in general. In other words, rheumatism is essentially a disease of the motor apparatus.

There are no less than fifteen common localities where rheumatic inflammation has its origin—among which are the hips, the knees, the ankles, the shoulders, the elbows, the wrists, the hands, and the heart. And it will be noted that they are all characteristically functional.

Nature of Rheumatism.—It is agreed that rheumatism is inflammatory, but the point of differentiation is chiefly as to the *nature* of the inflammation. Rheumatic inflammation has been regarded by some as differing from ordinary inflammation, not essentially, but only in the peculiarity of its situation; by others it is looked upon as specific in nature, resulting from the action of a special poison which operates directly in the production of this condition. One is the view of exposure to cold and damp; the other that held by those who look upon it as due to the action of a special "materies morbi" circulating in the blood. It ought to, if caused by cold, be most common in children and in older people, who have little power of resisting colds; but the reverse is the fact, for the disease is the most

common at the age at which the power of resisting cold is greater—from fifteen to fifty years of age.

An enumeration of the special characteristics of rheumatic fever I will quote here as given by Dr. MacLagan of London:

"1. The tendency to its occurrence is hereditary—transmitted from father to son.

"2. It is especially liable to occur at a particular age, being rare before fifteen or after fifty.

"3. It is apt to attack the same individual again and again.

"4. It does not confine itself to one joint, but affects several simultaneously or in succession.

"5. It attacks also the membranes of the heart.

"6. It very rarely terminates in suppuration.

"7. It is not much benefited by measures calculated to relieve simple local inflammatory action, but is speedily subdued by proper constitutional treatment."

Hence, we see there is no possibility of explaining these peculiarities by any views which do not recognize the existence and operation of a generally acting internal cause, although exposure to cold and wet are not the cause of acute rheumatism. There is ample evidence that such an exposure often acts the part of an aider and abettor in determining an attack of rheumatism. It does not, itself, give rise to the disease, but it renders the system liable to be affected by this special cause, making it more susceptible to its action.

Theories of Rheumatism.—The rheumatic poison is generally regarded as twofold—that which is produced within the system, and that which enters it from without. The former is the generally accepted theory.

One of the characteristics of acute rheumatism, as already stated, is profuse acid perspiration. The urine, too, is hyperacid. This excessive acidity naturally led to the belief that an acid condition of the blood was the production of the rheumatic symptoms, that the "materies morbi" was lactic acid. However, there are reasons for not accepting the view that the acid is the cause of the rheumatism, for, if it were so, the rheumatic symptoms should persist so long as the acid existed in the blood, and should decline when it ceased to be, and not until then. It means to show that the mere presence of lactic acid in the system

does not necessarily give rise to rheumatic symptoms. The argument in support of this theory I quote from Dr. MacLagan:

"1. Acute rheumatism is accompanied by excess of lactic acid in the system; the disease never occurs without such excess, and such excess is found only in connection with it.

"2. The injection of lactic acid into the system of the lower animals has been said to be followed by inflammatory changes, similar to those which occur in acute rheumatism.

"3. The administration of lactic acid to man has been followed by symptoms indistinguishable from those of acute rheumatism. Therefore, it indicates that it is the production of the acid in excess, not the mere presence of it. On this view of the matter, excess of lactic acid in the system becomes one of the ordinary symptoms of acute rheumatism—a result, and not the cause, of the morbid process. Excess of acid may cause joint-pains, but what causes the excess of acid? Hence, this theory which does not recognize and account for this increase is not satisfactory."

Treatment.—Since the theory, or rather the pathology of rheumatism has been so unsatisfactory, its treatment is also none the less, as there is probably no disease in which so many different modes of treatment have been employed.

The salicylates are dispensed by the old school; they claim that they should be given early, and in full and frequent doses in the commencement of the attack, thus arresting the course of the malady. The remedies that I frequently use are aconite in the early stages, bryonia as soon as synovial swelling begins, and ferrum phos. I would especially endorse Schuessler tissue remedies, such as kali mur. and sulph.; also calc. fluor., particularly in the enlargement of the joints. Then colchicine, as recommended by Professor Goodno, has proven very successful. Patients should be kept absolutely in bed between blankets, and special attention given to the diet, and exercise should be freely permitted. Milk, eggs and white meat should be given. Local measures play a secondary part in the treatment of rheumatism. The joints, whether they are involved or not, should be washed with warm water and soap and enveloped in absorbent cotton or flannel, held in position by flannel bandages. Blankets changed at suitable intervals should be used as bed-

clothing, and the swollen limbs supported by flannel pillows. Superheated steam may be used. The hand or arm is enclosed in asbestos and inserted into a cylinder; a thermometer is also inserted through a hole in the tube. Care must be exercised that the cylinder does not come in contact with the limb. The initial temperature does not usually exceed 70° C., and is increased according to the endurance of the patient, most patients being able to endure a temperature of 120° C. without much discomfort. Profuse perspiration always occurs, and the air in the cylinder is soon saturated with moisture. It is believed that this must be the condition in all forms of apparatus on account of the ordinary laws of osmosis. Of course the skin does not attain anything like the temperature of the air in the cylinder, and it is probably protected by the layer of gas formed from the evaporated perspiration. The healing factors seem to be the perspiration and the increased activity of the circulation. The diaphoretic action is not limited to the parts treated, but it may affect the whole body. The usual immediate results are relief of pain, then increased activity of movement and loss of the feeling of weakness. Electricity in the form of Faradism is often of positive benefit. Treatment by hot-air baths is often productive of good results, but is contra-indicated when there are organic cardiopathies. The limb is encased in a specially prepared cylinder containing air at a temperature of 150° F. and gradually increased to 240° F. The application is continued from forty to forty-five minutes. Turkish baths, warm sea-water (those of Schwalbach and Nauheim) are all useful and recommended in the treatment of rheumatism when there is cardiac disease. Mineral-spring baths are recommended, such as are located at Virginia, Hot Sulphur and Mt. Clements. In muscular rheumatism the hot-water bag or bottle is very effective. Methyl chloride spray is said to cure lumbago, as well as pleurodynia, and strapping the side is occasionally beneficial. Salicylic acid—a 2 per cent. ointment—freely rubbed in the skin, is also recommended.

Incidentally it is worthy of observation that the cause of gonorrhœal rheumatism, usually a chronic posterior urethritis, must first be removed before we can hope to eradicate this type or form of rheumatism.

A SELDOM-RECOGNIZED FACTOR FOR SOME OF OUR FAILURES WITH DRUGS.

EDWARD R. SNADER, M.D., PHILADELPHIA.

Every physician of even feeble observing powers cannot have failed to note the wonderful efficiency of some one or more of the drugs he dispenses. Every time he prescribes the drug he gets an answer that is pleasing and satisfactory. He has been able to do with the drug all he could reasonably expect to do, and not unfrequently far more than he dared to hope. This drug becomes a pet one, and he relies upon it with a confidence born of oft-repeated favorable experiences. He learns, as it were, to swear by that medicine, and cherishes every drop of it. He looks askance as the bottle becomes emptier and emptier day by day. In his admiration of the particular drug he does not recognize the fact that, within the sphere of its action, he has a right to ask every drug in his armamentarium to be equally as efficacious as his favorite and stand-by. He does not recall the thousand and one times that indicated drugs have failed. This is an awfully significant fact; but, with all its significance, the fact only serves as a background to enhance the special value of his wonderfully effective drug, and the pregnant meaning of the numerous failures with drugs where we have every right to expect beneficent action is lost sight of. This mental attitude is not to be wondered at when we take into consideration that the number of failures so overwhelmingly outnumber the favorable results. From the very frequency of failure the impression of unusual efficacy is enhanced, and a substratum of doubt regarding drug action is unconsciously formed by the repetition of the mental concept of frequent failure, and unconscious mental pessimism is the consequence, and our almost constant attitude of mind toward a drug we have administered, unless it be our true and oft-tried friend, is one of expectancy, and we are not much disappointed when a drug fails to act. We often, in our chagrin, blame our power of selection, blame the failure on the

lack of properly adapted strength for the individual we are prescribing for, accuse the patient of being irresponsive by reason of an idiosyncracy, in fact, blame everything under the sun but the drug itself. We buy our drugs of a reliable house, and we believe, therefore, that the drug is blameless, and everything else blameworthy. Is this the correct position to assume? Personally, I am sure that in the vast majority of instances, at least, this is not the correct view. Before you pass final judgment, think of some other experiences you have had with drugs. When your bottle of old stand-by ran out, you hastened to have it renewed at the same pharmacy where you purchased before. You find the same color to your drug, the same absence of sedimentation, as was shown by your whilom friend, and in fact, you believe you are using exactly the same drug; and so you are, so far as the name, the maker, the pharmacy, the appearance, goes; but that fine-looking drug turns out to be a rank counterfeit, and disappoints you so often that it very readily takes its place among the vast array of unreliables. You have had that experience so many times that it, too, becomes quite a matter of course, and after a gentle swear-word or two you go on plodding away with the experimental method as of yore. Recall now some other episodes. How a certain case appeared to you to call absolutely and unequivocally for a certain drug, and you have given it without result, and you have run the gamut of strengths up and down several times, and finally, you, in desperation, have dropped the goods of your favorite pharmacist, and have gone into the drug store on the corner and bought a good supply of a measly-looking fluid extract, and you have given it with your usual feeling that you are going to fail, and lo, instead of failure, you have had a really brilliant result, and one, too, that thoroughly justified you in your conviction that you had selected the right drug, and that all you wanted was a medicine that would act as you had a right to expect it should act; for drugs are not for show, they are for work, and if they do not work, they are far more than useless, they are dangerous. By employing these useless stuffs we are losing time, prolonging suffering, inflicting unnecessary expense and anxiety,

jeopardizing our reputation, making ourselves doubtful of our ability, and in an hundred ways retard progress in medicine, as well as in other obvious ways fail to fulfill our just expectations.

I personally recall several instances bearing directly on this point. I saw a case in a near-by city with a fellow practitioner, and recommended the administration of a certain drug. It was given for several days without result, and I was appealed to again by telephone. Satisfied that the drug I had selected was capable of doing the work I intended it to do in that particular case, I suggested its continuance, and that the medicine be given in such doses as would bring the desired result, of course increasing the doses gradually. I did not know at the time that the drug (which I had recommended in five-drop doses of the tincture) used by the physician in charge of the case was a fluid extract from one of the best known and most reliable old-school drug-houses in America. The attending doctor followed the directions very literally, until, indeed, he was giving his patient teaspoonful doses of the fluid extract, and that, too, without a particle of result. The medicine, even in these enormous doses, for they were enormous, almost lethal, for this particular drug, had no more effect than so much filtered Schuylkill. At this stage I was again appealed to, and I suggested that he try the tincture of the drug made by a certain homœopathic pharmacy, and that it be given in the originally-recommended dose of five-drops. This direction was also followed, and lo and behold! the five drops of the tincture did more therapeutic work in twenty-four hours than teaspoonful doses of the fluid extract had been able to do in a week. In point of fact such a comparison as I have made is an insult to the tincture, for the fluid extract had been actually of no service whatever. One would be inclined from this experience to forswear all fluid extracts, and to feel stuck up about his own tinctures, made with such alleged immaculate care. But, before drawing such an *ex parte* conclusion, let me present another little experience. I had a case in which I was sure that a certain drug was indicated, and gave it. No result followed. I repeated, thinking to give nature a chance to know that some one was on

the track of stirring her up to her duty. No response. Of late years I have grown tired of accusing myself of inability to select accurately an obviously indicated drug. That little salve I seldom offer to my therapeutic conscience, as of yore. The blaming I used to give myself has not taken all the self-respect out of me, and has left me enough conceit to believe that I can occasionally see the indicated remedy. I repeated that drug in ascending doses until I reached sixty drops at the dose, and still no appreciable result could I note. All this dosage was with a tincture made by one of the most reliable homœopathic pharmacies in the world, bar none, and the same one, too, from which I had gotten that magnificent tincture that did the fluid extract up in one round with a solar plexus blow. My case hung fire on this "reliable" tincture, and at the nearest drug store I procured some of the fluid extract, made by the same firm whose other drug had proved so rankly unworthy, and this new fluid extract in two-drop doses did the work that I could not get out of sixty drops of a specially-prepared tincture. You see, therefore, that there are several sizes of shoes here, and they will fit on the feet of both the so-called refined homœopathic pharmacist, and on his alleged crude and bungling old-school *confrère*. Please, please, at this point do not let some one unthinkingly remark, Why did you not give your drug in a higher potency? I am not discussing just now the potency question, but simply one of pharmacy. But simply as a matter of experiment, suppose I had given a potency run up from either the ineffective tincture or the fluid extract, I opine it would take the imagination of a Jules Verne to see the resulting therapeutic action. What effect could one logically expect from potencies made from such absolutely useless drugs in their crude form? I fear it would take more than the wonderful and mysterious dynamis to do anything with such drugs. It would need a special creative act, unknown to us poor mortals, to make something out of nothing. Possibly, however, some thinking high potentist may see here a reason why *his* drugs fail. They may start the original potencies from just such worthless mother-stock as I have been endeavoring to illustrate.

One factor of drug failure at least lies in the experiences I have just cited. A solution of the trouble will only come when we understand the cause of these only too obvious variations in drug strength. Do reliable pharmacies furnish these unreliable medicines to the profession and public wittingly and with malice aforethought? My answer is most emphatically, No! They are as much in the dark as to the efficacy of the drugs they dispense as are the doctors who dispense or prescribe them with a confidence borrowed from a knowledge of the reputed excellence of the drug on the one hand, and their belief in the honesty of the pharmacist on the other. I think the whole medical profession would be a unit on one thing at least, and that is in a demand for reliable drugs, and of absolute and unequivocal condemnation of any attempt to foist upon either the profession or the laity drugs not up to the highest possible standard. The pharmacist who would wittingly sell a drug of known inactivity, when one of pronounced activity is wanted, is beyond the pale of consideration in a paper of this kind. I can only say that no greater fraud is possible than that, and there are certainly circumstances in which such action is even worse than murder. Such offenders should be drummed out of town, and then hung and quartered, exposed to disease, and then given the innocuous "medicines" they have sold to other sufferers.

The lack of efficiency lies, then, not with the honest pharmacists, but in the drugs themselves. They vary in strength from perfectly natural causes. In the gathering of plants, flowers, leaves, roots, etc., to make tinctures and fluid extracts, the utmost care is observed as to the time of gathering, the apparent perfection of the parts of the plant to be employed in manufacturing the drug, and, in fact, every single precaution is more than anticipated, in order to secure the best possible purity and evenness of strength. With all this care, however, the drug made is apparently, for some inexplicable reason, afterwards discovered to be therapeutically inoperative. Why is this? The reason is perfectly obvious, if we accuse nature of not always being in the same mood. In other words, seasons are not alike. Some have more rain, more sunshine, more

wind, more minerals in the soil, less nutritive material in the earth. In point of fact, nature sometimes parallels in her wild plants used for medicines the effects she produces when a plant has been domesticated for several generations. It is a fact well known that plants of known lethal qualities when cultivated soon lose their power of producing death, soon lose all their so-called drug efficacy, their inherent qualities, although the general appearance may be retained, or even improved upon by the process of cultivation and care. Examples of this kind will be found in the foxglove, in the wild turnip, the wild potato, the cucumber, the marigold, etc. If the apparently more favorable environment of careful cultivation can render a formerly toxic plant innocuous, or practically so, one can easily understand how the vicissitudes of season can alter the essential quality and character of a presumably medicinal plant. The pharmacists are not to blame, therefore, for this unevenness in power displayed by drugs, but nature is. Nature's forces are changeable infinitely, within a certain limited scope, and while she apparently repeats her plant work every year with photographic perfection, certain underlying laws of plant growth and development vary from season to season.

In a vague sort of a way, the profession, as well as the drug-makers, have recognized this factor as a cause of inefficiency, and some have reached out towards alkaloids as a remedy for this irregularity in medicinal power. Possibly herein lies the secret of the growing tendency toward alkaloidal medicines. While this is, perhaps, a step in advance, so far as certain specific uses of a drug is concerned, the truth of alkaloidism is only a partial one at best, and we are only on the threshold of the initial knowledge on this subject. While a study and use of alkaloids will undoubtedly precisionize our knowledge of drug power, and, in many instances, we will be able to get more out of a drug than formerly, we must ever be on the alert to find new alkaloids in old drugs, and we must be sure we have found the alkaloid that is doing the effective work. There is a danger in alkaloidism. We must not forget that the whole drug in its purity is a powerful therapeutic power, different in action from the isolated principle, and, if we were

to adopt alkaloidism and drop full-drug prescribing, we should probably lose more than we would gain, so far as our ability to control symptoms, states and conditions in disease is concerned. Besides, if the whole plant from which the alkaloid was derived was of the inefficacious kind, the alkaloid would be as ineffective as its drug parent. The whole secret of general drug efficacy, whether of fluid extract, tincture, alkaloid, or what not, is, that drugs shall be of standard strength before they are dispensed to the profession.

An effort in this line has already been inaugurated by a Western firm, who assays for alkaloids certain of its drugs, and guarantees its drugs to be of a certified strength. It has ceased to depend upon the eye as a means of determining whether a given drug is good therapeutically or not. I understand that this firm was led to this experiment by finding a whole cargo of cannabis indica, that looked the very perfection of plant life, when reduced to fluid extract form, to be absolutely of no value when compared with an old supply of the drug they had on hand. The inefficiency of the drug was discovered by testing it on animals, and the efficacy of the old drug was tested in the same way. The estimation of drug strength is certainly a move in the right direction, and in one way or another ought to be adopted by every drug manufacturer. We have a right to demand effective rather than elegant pharmacy, although we want both elegance and efficacy. We have a right to expect a reasonable and uniform degree of strength. We ought not to find that a drug given to an individual in the accustomed dosage of that drug needs to be increased four- or fivefold before an effect is observed, and, on the other hand, find a drug so potent that a minimum amount gives unexpected results, although we are very willing to take the latter alternative if we cannot get uniformity.

Another firm has lately lauded the wonderful results achieved from green plant tinctures. They, too, realize that drugs are not of uniform strength. But, while certain tinctures made from green plants are apparently of more service therapeutically, we must learn more about the effects of chlorophyl before we unequivocally endorse this departure from the ordinary

methods of pharmacy. Certain it is, without special investigation, that the rule of making all plant-drugs in the green tincture would not be of universal application.

There are many, very many, effective drugs made from dried plants, and it is reasonable to suppose that some plants have their medicinal virtues increased by the very process of drying. Possibly new alkaloids develop. Every drug is a law unto itself regarding the manner of its preparation, and as to whether its therapeutic value is enhanced by this, that, or the other method of preparation. Pharmacists must first individualize, before they generalize, and must not make arbitrary classifications of the methods of preparation until experience has demonstrated beyond peradventure the best, and consequently the only, method of rendering a given drug capable of doing the work which it is proven that drug is capable of doing. The truth of the matter is that the most learned in pharmacy do not know any too much, any more than do we as physicians. True pharmacy I believe is in its swaddling-clothes so far as the preparation of absolutely reliable drugs is concerned, and pharmacy will remain in the stage of infancy until it ascertains a method of furnishing the profession and laity with drugs of proven value. The method of determining that a given drug is a good one simply because it has been gathered at the proper time of the year, that it smells like a good drug, and has, in fact, all the naked-eye appearances of a perfect plant, must be abandoned. For this method must be substituted either chemical tests, to determine the alkaloidal and other strengths, or by direct experiments upon animals to determine the drug's power to produce the so-called physiological or pathogenetic effects, and this investigation must be made for every medicinal substance, whether mineral, vegetable, glucosidal or alkaloidal. This examination must be made every time a drug is freshly made. In this way we will soon have effective drug weapons, and the honest pharmacist will not unwittingly make fools of the physicians who prescribe his drugs, and the honest doctor will stop his attacks on the medicine-makers, and the pharmacist will teach the doctors much by the discovery of unexpected drug effects, and the doctor will thank the pharmacist as a worthy co-worker for humanity's sake.

It is doubtful whether we dare ask our homœopathic pharmacists to prove a drug on the healthy before they let the medicine go off their store shelves, although this would be the ideal method. We can, however, demand that the drug be not judged to be good because it looks all right. We can demand that it be tested chemically or upon animals, in order to demonstrate that the drug is an active one. I think it may be assumed that a drug showing alkaloidal strength has the power to produce the symptoms of that drug when given to the healthy. The principal thing we want to know is that the drug is not practically inert. We must certainly demand that drugs from which potencies are made shall have a demonstrated power in the tincture.

Perhaps I have gone too far afield in attempting to discuss only a single factor for our failures with drugs. I cannot but believe, however, that a recognition of this one single factor will be of service to us in our fight with disease. Drugs are our tools, and if there is one workman on the face of the globe who ought to have perfect tools it is the man who fights disease and death. Medicine has made much progress in the last two decades, in diagnosis, in bacteriology, in hygiene, in the prevention of disease, and we shall add new and deserved laurels to her crown if she can but improve her drug armamentarium up to a practical and uniform standard of usefulness. May the happy day soon come when we can give a drug with a feeling that it will do the work we intend it to do in our efforts to cure or ameliorate the horrors of disease. Let us have uniformly reliable drugs.

SEXUALITY; WHY AN AVOIDED SUBJECT.

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"I cannot do much," said a little star,
"To make the dark world bright;
My silver beams cannot struggle far
Through the folding gloom of night!
But I am a part of God's great plan,
And I'll cheerfully do the best that I can."—*Selected.*

"SPEAK not at all, in anywise," says Carlyle, "until you have somewhat to speak; care not for the reward of your speaking, but simply and with undivided mind for the truth of your speaking."

An attempt to discuss a subject beyond one's capacity and knowledge must end in failure. That he should be convinced of the truth and importance of this is demanded on grounds apart from moral. Our feelings commonly exert a too powerful influence upon our intellectual activities.

A deep moral interest, as well as a scientific one, in a subject fixes the attention on it, and calls up from memory related thoughts, directing them to the chief issue, while the consciousness of insincerity distracts the mind and thwarts the purpose.

The discernment of motive and action, in order to have a correct judgment, forms part of an inductive method as conclusive in regard to the facts which determine a man's character as in relation to science or philosophy itself. No mentality can assimilate a statement it cannot understand any more than the stomach can assimilate substances entirely foreign to it. It is said that while "alcoholism has slain its thousands, sensuality has slain its tens of thousands." There is no necessary ill in the possession of sexual knowledge. It is when the heart and mind are perverted from an ignorant conception of the natural physiological functions of the sexual organs that the demoralization and destruction of both moral and physical life begins, and goes on to its fatal end.

"We sow a thought, we reap an act;
We sow an act, we reap a habit;
We sow a habit, we reap a character;
We sow a character, we reap a destiny."

There is in man a powerful instinct which is called sexuality, and in combination with the nobler qualities of man is called love. Where this impulse exists without the nobler attributes of life, and when indulged in simply for the gratification it affords, it is common sensuality. Just as common sensuality will drag its victim into the lowest depths of vice, so, on the other hand, love is the incentive to all that is noble and beautiful. It is the foundation of our social life, our morals and laws. Sexuality in man is much stronger, and his desires more powerful, than in woman; therefore his dangers are greater. During the stage of childhood the only office the male organ should have is for urinary drainage from the bladder. Its nerve supply is intimately associated with that marvellous system of nerves which controls all the vital organs, the sympathetic nerve-plexus. Upon the health and good order of this plexus depends the action of the heart, the brain, the kidneys, the lungs and other organs, and from this close relationship it can be easily understood why an injury or irritation in one place must make its sympathetic influence felt in other related parts. As children need all possible strength and energy for development, it is readily seen how necessary it becomes to bestow the proper attention upon the sexual organs. Apart from moral reasons, there are sanitary arguments of the weightiest character to show that no influence that would tend to sexual excitement in a child, however young, should be permitted, as it is likely to lead to the commission of the greater evils of masturbation or sexual excess, with the resulting evil consequences. There are, indeed, instances of precocity, apparently without entailing debility or disease, which are not readily explained.

The prevalent opinion that sexual desires indicate the necessity of indulgence is an error. They are among the strongest influences known to human nature, but their strength simply suggests the importance put by nature upon the preservation

of the species; thus it may be truly said that self-preservation is the strongest human instinct, with the instinct of propagation a close second. Nature never intended that animal impulses should dominate the will of man.

Properly understood and used, they make a man better by reminding him of his duties to society and posterity, and lead him into the most useful and happy relation in life.

Dr. Carpenter, the eminent physiologist, says: "The development of the individual and the reproduction of the species stand in inverse ratio to each other."

Emerson has said: "The preservation of the species was a point of such necessity that nature has secured it by intensifying the sexual passion even at the risk of commission of crime."

The way of escape must be found by the light of instruction, pointing out the danger, the disease, the sin, the shame on the one hand, the straight and narrow path of consecration, self-denial, righteousness and honor on the other.

The great need of to-day is that the medical fraternity shall become fully awakened to the importance of the fact that it is for them also to become the teachers and guardians of sexual knowledge, and not to entirely leave such subjects for the clergy and parents, whose opportunities and privileges for such knowledge and instruction do not at all compare with our profession. Henry Varley, of London, an eminent orator and writer, says: "In a very important sense the seed of man is his life. Without doubt it is one of the most vital forces of our physical constitution. Its retention, therefore, is a necessity of the highest moment to youth and manhood. The vigor of the nervous system is mainly dependent upon the seed, which may be described as 'the sap of the man.' Bound up with the healthy quality of this generating force is the strength of the brain, the richness of the blood, the brilliance of the eye, the vigor of the mind, the hardness of the muscles and the firmness of the flesh." Further on he says: "It is a melancholy fact in human experience that the noblest gifts which men possess are prostituted to other purposes than those for which they were designed. The most valuable organs of the body are those which are capable of the greatest dishonor, abuse and corruption."

Gentlemen, physicians, I ask in all candor, Is it not a shame that children, especially boys, should grow up and be sent into the world in practical ignorance of the uses and abuses of the powers which they possess? Is it not a fact that the proper knowledge and use of this force which is intended to conserve the strength and wealth of the man is unknown, because a delicate sense of modesty, or mere prudery, effects a silence concerning that which is producing more immodesty and immorality than all other causes put together? This knowledge is as necessary and essential as cleanliness, exercise, restraint, training, or any other factor in a sound education. Do you say it is impracticable and impossible to follow out the above declarations? Permit me to reply, "Nothing is impossible that is right. Nothing that is right is impracticable." Upon individual ability to recognize true greatness of individual power depends the measure of our successes in life.

It is undoubtedly true that the most beautiful sentiments, the most majestic conceptions, and the most vivid realizations of infinite power, at times, seek in vain to find proper expression. "Man" is said to be the product of his own self-ripened wisdom; and all along his upward struggle from the beginning he has paid the penalty of every ignorant thought and act. Throughout the ages of the world each age has produced its enthusiasts upon the varied subjects of thought and action, by which the people of their times were most deeply interested. Many thinkers were beyond the age in which they lived, but their work has borne fruit such as has been necessary to carry civilization to its present point in the upward road to ultimate perfection. The result is that progress all along the line is so marked and rapid that mature thought and expanded intellect are found in nearly every avenue, making it imperative that we give heed to the subject under consideration, if we as physicians are to fulfill our true mission. Shakespeare, in "A Bunch of Forget-me-nots," says:

> "To thine own self be true;
> And it must follow, as the night the day,
> Thou canst not then be false to any man."

Dr. J. F. Scott, in his recent work, "Heredity and Morals,"

remarks, "To see men give rein to their animal passions, subjecting themselves and others to so many risks of which they are ignorant, is intensely saddening."

He quotes Jeremy Taylor as follows: "It is impossible to make people understand their ignorance, for it requires knowledge to perceive it; and therefore he that can perceive it hath it not."

This subject is one of peculiar interest and grave import to the individual, the family, the nation. The truthful but melancholy fact is that tens of thousands of American husbands and wives, ten years after marriage, are despoiled of all beauty and vigor by abominable practices. Their appearance with sunken eyes, faces pale and bloodless, hair prematurely gray, tells its own story of earth's penalties for willful transgression of nature's laws. Where natural law is permitted to direct and control, there men and women will be found in all their vigor and loveliness. All the precious education and discipline of parents which follow the proper training of children and happy home life are thus realized. The writer is fully aware of the general rule embodied in the legal maxim that "He who affirms must prove." The amount of evidence already submitted he feels is sufficient justification for the presentation of this subject. In closing, permit me, in part, to quote from an address of Prof. Howard, of Rochester:

"If God ever gave a people a country that was worth fighting for, worth living for, worth dying for, he has given it to the people of the United States. It holds the key to the future destiny of the race. King of Commerce, King of Science, King of Civilization.

"But, if America is to be king of anything, we must down 'the whiskey ring,' and have taught more freely and intelligently information concerning the sexual function. There is great danger ahead if we do not fully appreciate these grave truths.

"Right makes might, and in that faith let us to the end endeavor to do our duty as physicians and conservators of the moral as well as physical lives of those committed to our care, as God and a good conscience gives us to understand it."

DISCUSSION.

Dr. B. F. Betts: I would like to say, with respect to the sentiments expressed, that if they were widely diffused, more widely recognized, it would be of more benefit to the human race than almost anything else in their education that we can think of. The gynæcologists to-day must recognize that in their practice they meet with more cases of disease dependent upon perverted sexuality and a disposition upon the part of the husband to disregard marital relations than from any other cause. The fact that a young man has contracted a disease before marriage which is likely to engender disease in the wife after marriage does not deter a great many men from consummating the marriage relations. Man must have more respect for womanhood, and he must have more respect for his manhood; then we will have fewer women suffering from serious pelvic lesions. The marital relation is a holy one, and must be recognized as such if we wish to attain to the highest stage of civilization. There are a great many habits that are common in civilized communities that should be changed. The custom of the single bed, for instance, in this country, instead of the double bed, as is prevalent in European countries, must be abolished. It has been fifteen years perhaps when, in reply to a paper by old Dr. Guernsey—the venerable Henry M.—this thought occurred to me, and I believe that it is from sexual excitement—undue sexual excitement—that a great deal of trouble, degeneration—mental and physical—arises.

There should be, of course, in marital relations always mutual concession; and if this point, if this idea, is paramount in the minds of the two contracting parties—there must be mutual concession—a great deal of the excess of the present day would be avoided; and it is excess and disregard of the marital relations from which a great deal of trouble arises at the present day, causing the diseases which are so prevalent in women, and causing so many diseases that are prevalent in men.

Dr. Hubbard: In my special work on the nose and throat, I find that where sexual perversion persists it is almost impossible to get results, and that where you cannot control a patient

under such conditions, catarrhal states are almost absolutely beyond your control. I have looked into the subject closely, and I find that this is an important fact also on the cold-catching tendency, that where sexual perversion exists, as it does in many cases, these parties are susceptible to cold, and they do not yield readily to treatment.

PARALYSIS OF ANUS.

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Master F. H. W., Jr., a stout, well-nourished lad of eleven; was always soiling his drawers with fæces. His father had punished him, thinking it was carelessness. There had been no loose bowels or any sickness in his case for several years. This condition dated back some six months. At first it happened only occasionally, but finally became a thing of daily occurrence. On examination, when I pulled the buttocks apart, I found what looked like a tube cut-off, being able to see into the rectum. The anus stood open, and the fæces flattened over the buttocks, there being no contraction, voluntary or involuntary. A case of paralysis of anus and lower bowels; no cause could be given. This local condition all to prescribe for, no subjective symptoms could I elicit. (Phosph. has paralysis of lower bowels; anus stands open.) Phosph. 4th to 30th brought this condition to a close in six weeks, and has not returned so far. Relate this case to show what *even one* defined symptom of a well-proven remedy is capable of doing.

INTRODUCTION TO DEMONSTRATION OF MICRO-ORGANISM OF MALARIA.

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The Pathogenic Agent of Malarial Diseases.—I shall limit my remarks upon this subject to a very brief *résumé* of the history of its discovery, and some reference to the influence already exerted by the discovery of the parasite of malarial fevers upon the diagnosis of malarial diseases. The demonstration of the different varieties of the parasite, together with the description of the methods by which it may be recognized, has, fortunately, been left in the more capable hands of Dr. D. B. James.

Dr. James is an expert in this line of work, and we shall all, doubtless, find much to interest and instruct us in his portion of the paper.

The medical profession has been acquainted with the group of malarial diseases for a long time, but nothing positively was known of the specific parasite until the year 1880.

In the literature of this subject, even as far back as the second century B. C., may be found references to the probable parasitic origin of the disease. And from this period all the way down the centuries, one may find occasionally in the writings of medical men, statements indicating at least a theoretical belief that this parasite was either an infusorium, a spore, a bacterium or an alga. Long before the year of Laveran's triumph this specific organism had doubtless been seen and described by different observers. Thus in 1847 Meckel, and in 1848 Virchow, came very near to the discovery which Leveran announced in 1880, over a quarter of a century later.

Another interesting fact that might be referred to was the statement made by Binz in 1867 that in his opinion the efficacy of the specific quinine depended upon its power of destroying the lower organism which was, doubtless, the real cause of malarial diseases. He had been studying the influence of protoplasmic poisons upon the infusoria, etc.

But we find that the profession at large received the first announcement of the brilliant discovery of Laveran in 1880 with apathy. It was several years, indeed, after he had announced to the world that he had found the specific micro-organism of malaria, and had described and even demonstrated it, before it received the universal attention that it deserved. Thus we perceive that the profession does not always rush to the support of a "new thing" even when it is a "good thing" and true. Most of us can remember the time when the term "malaria" stood for almost anything. The greatest possible variety of ailments, febrile and non-febrile, were described as malarious. And we did not at that time even know what malaria was. All this has been changed. "The invariable association of the specific organism with all forms of the disease in question is to-day an established fact," which, perhaps, none will gainsay.

The influence of Laveran's discovery will be tremendous when the entire profession shall have come to appreciate the importance of the recognition of this micro-organism in the diagnosis of malarial diseases. As an example of the probable inaccuracy existing in former years, I would like to mention one or two items from the statistics of the cities of Brooklyn and Baltimore, as given by Dr. William Sidney Thayer, an authority upon malarial diseases.

From 1884 to 1890, in Brooklyn, there were 1413 deaths from malarial fevers; 1002 deaths from typhoid. During the same period in Baltimore, there were 934 deaths from malarial fevers; 902 deaths from typhoid.

These statistics were, of course, based upon the certificates of physicians, and were at that time accepted as accurate. Would any one believe them accurate to-day? Indeed, will any such statistics be possible in the future when the accurate diagnosis of malarial diseases shall have become universal?

Some five or six years after Laveran's first announcement, other investigators began to study the blood, more particularly in the different varieties of malarial diseases, and it was not long before it was further stated that the tertian and quartan fevers each depended upon a distinct variety of the parasite, and that it was possible to determine and recognize certain

characteristics, which would enable one to differentiate the parasite of one variety from that of the other variety of fever.

This was a decided advance, and as repeated confirmations of the earlier discoveries were announced, we find the profession at the beginning of the present decade in the possession of definite knowledge, sufficient to enable them to accurately diagnose, by the microscope, tertian intermittent, quartan intermittent, and the remittent fever so common in certain localities in the fall of the year. There are, of course, many points that still require further elucidation, but doubtless we shall in time possess a definite knowledge of all those matters which are now uncertain.

The specific organism of malaria will be found in almost all our cases, providing the examiner is one who has had some experience, and providing the search is a thorough one, and that the case has not been saturated with quinine previous to the examination. Sometimes it is advisable to examine the blood, especially during the paroxysm, if it be an intermittent case. Let us consider for a moment the influence which this discovery of Laveran has had and must continue to have upon the differential diagnosis of the malarial diseases and those diseases symptomatically allied to the former. When we mention the possible danger of the physician confounding the intermittent and remittent varieties of malarial fever with the chills and periodical fevers of tuberculosis of the lungs, there comes at once to the minds of all of us many cases in which these affections have been so confounded, and often most unfortunately for the patient. Of course, there are many points in the differential diagnosis of these different affections that must be borne in mind, but it will often, at the present time, hardly be necessary to go outside of your microscope's revelations in order to arrive at pretty definite conclusions; for, if the blood shows marked leucocytosis, no parasites; and if the sputa shows tubercle bacilli, it is highly probable that you have a case of tuberculosis; while, on the other hand, if you find no leucocytosis, and the malarial parasite, it is surely malarial disease.

Again, it has certainly happened occasionally to all of us that we have had to differentiate between the chills and febrile

phenomena of septic origin and simliar manifestations due to malarial infection.

Doubtless we have all had, in our past experiences, cases of what may be termed "post-partum malaria," and every surgeon knows the amount of anxiety that can be aroused by "post-operative malaria." Well, thanks to Laveran's work and the labors of his co-workers, we may to-day more easily differentiate these conditions from a true septic infection. Thus parasites, or pigment and diminished leucocytes—malaria. While no parasites—no pigment and marked leucocytosis—is strongly presumptive evidence of sepsis under the circumstances referred to.

And, further, think of the cases of typhoid fever that have been erroneously considered to be cases of "malaria" in the past. Of course it is generally the remittent malarial fevers of the autumn that will be so mistaken for the more serious fever already mentioned.

There are many contrasting symptoms in the two diseases, but the examination of the blood is to-day often conclusive, and always confirmatory. Here we may find in the blood the small hyaline parasites of the autumnal fever, with bi-concave sides, resembling perhaps a ring; or pigment granules, or at least pigmented leucocytes. And should we not find any of these evidences of a malarial disease, we may try the blood for the reaction of Widal.

And one might go on for some time, multiplying these instances in which much assistance can be had from an examination of the fresh blood in these doubtful cases; but this much must suffice to at least suggest to all the vast importance, in a practical sense, of the discovery of Laveran.

DEMONSTRATION.

As the lantern pictures were reflected upon the screen, Dr. James spoke as follows:

Dr. D. B. James: In the first place we cannot expect to understand the examination of the blood, as far as the malaria parasites are concerned, without knowing what normal blood looks like, and the common pathological changes. I will show you

first a specimen of normal blood. I want you to note the regular size of the red corpuscles; there are no white corpuscles in the field whatever. There is a similarity in the shape and size of the red corpuscles. You will see in some corpuscles light spots. They often become difficult of diagnosis between the normal red corpuscles and the hyalin variety in tertian, quartan or autumnal fever. The majority, however, have a uniform redness. We distinguish the three varieties. First, the tertian; that is the variety we find most commonly in this section. Therefore we will devote most of our time to it. It is best to use a fresh specimen of blood for examination, and if you can sit down by the bedside to make your diagnosis, so much the better. If you can, cover the edges of your slides with vaseline or paraffin. The dry specimens will not show up as well, and you cannot as thoroughly distinguish the plasmodium or hæmatozoa from the surrounding red corpuscles. The majority of observers have used fresh specimens of blood to carry on their work. In the tertian variety it runs its cycle in about forty-eight hours; that is, it completes its growth from the time of sporulation until the hyalin bodies form again, approximately in forty-eight hours. We first find the small hyalin variety. Here we have the normal red corpuscles. Here is the beginning of the hyalin body, here it is developing, and this is still further developed. We can prove what they are by the change in the shape of the bodies. At first they are small, round, colorless discs. They afterwards become larger, increasing in size, the body itself changing shape. Further on they take on a granular appearance. Small, round pigments form, usually at the edge of the periphery of the blood disc. You will notice, further, that the red corpuscle increases in size. In about twenty-four hours the body will occupy relatively about half the size of a red corpuscle. In forty-eight hours, or in a shorter time—about forty hours—until segmentation is about to take place, the corpuscle is probably half again the size of the normal red corpuscle. The body has then developed to its fullest extent, and evidences of sporulation take place. This is evidently a specimen before the sporulation takes place. You will notice the difference in size

of the normal red corpuscle and the corpuscle containing hæmatozoa. The pigment granules are distributed. There is left a slight light ring of corpuscle. This one is still on the tertian variety of corpuscle, a little irregular, but increased in size, and shows the granular particles tending toward the edge of the periphery. This is a similar specimen—the granule still in the corpuscles; size increased, not as far advanced as the second we just saw, as there is still evidence of considerable corpuscular element. Here we have a small hyalin body just about forming, which is a rare condition. This shows the granular form of the next stage of the hyalin variety. Here we have evidence of the hyalin variety, but they show the amœboid changes taking place. The body is considerably larger, and in this one we find the granules beginning to appear. I spoke of beginning segmentation. In about forty hours after the organism has existed, from the small hyalin variety until it passes through the granular form represented here, which is about to pass from the granular stage to sporulation, we have usually about that time the granules assuming the concentric position, but not essentially forming in one group. In the centre of a corpuscle about this time, the corpuscle shows evidence of white or opaque substance, a thickening in the element. They usually form in segments in the tertian variety, running probably from fifteen to thirty. Each one will gradually assume this dark spot, which is one of the toxic varieties of the growth. They will go on to further development. It usually starts at the periphery, and does not run, as a rule, in this variety. If we are fortunate enough in our examination, if it be a fresh specimen, we will find a sudden bursting or an explosion of the corpuscle, and the element will often go outside of the red corpuscle. This shows where we have, instead of the explosion, as it were, the elements going out,—the segmentation taking place in a regular cycle. This will break eventually into this form. The granules simply seem to be thrown around the field without any connection with the red corpuscles. They may go through the circulation for a short time in that existence, but soon attack the red corpuscles again. Then we have the cycle going

on, completing its course again in forty-eight hours. This is simply a continuation of other slides of the same variety.

We now start on the quartan variety. In the quartan variety we have the hyalin bodies resembling more markedly the tertian variety. You can hardly distinguish between the hyalin bodies of the tertians and the quartans at first, but they soon become different, the granules, however, being a little coarser, heavier and closer together. They also tend more to the periphery than the tertian variety. They seem to deposit in all cases around the edge of the growth. You will notice here that in this growth, occupying a corpuscle, that it is larger than the surrounding unaffected corpuscles; the protoplasm or corpuscular element seems to contract, and the edges become darker. You will remember, in the other variety, the corpuscle around the edge became lighter, almost an indistinguishable mass of protoplasm around the edge. This variety has taken a heavier staining, even smaller than the normal red corpuscle. You will notice in the fresh specimen that the amœboid motion in this variety stops sooner than the tertian variety. Sporulation takes place in about the same manner. However, we can distinguish between the varieties in that the corpuscles are smaller, and where we have in these specimens the groups the pigment is to be seen, though it is not necessarily in the centre. The spores are regular, or rather the segments are more regular in outline, not so numerous in number, as evidenced here. I have, in contradistinction to the variety that I have just mentioned, fifteen or twenty small segments distinctly outlined, and smaller than the tertian variety. We have also in the quartan variety, as demonstrated in this one, a radial deposit or position of the pigment. That is almost characteristic of quartan fever. We do not find it in tertian at all.

We now pass to the specimens that must of necessity be incomplete, for the reason that when we study the æstivo-autumnal fevers, we can only obtain the hyalin variety, or wait for a week or so to get evidences of the ovoid or concentric. We can only find specimens of malarial parasites in the spleen or bone-marrow in this variety of fever, or a few of the granular, unless it be of the first variety. The hyalin bodies resemble

the two former varieties, and cannot be distinguished at first, but when they start to granulate they will have a very few granular deposits; probably one or two small deposits will be found in the periphery of the corpuscles, indistinguishable, as we saw in the tertian and quartan variety. They go on to segmentation—sporulation—in about the same cycle as the two former varieties. We noticed, if you remember, in the tertian variety the corpuscles are larger and paler; in the quartan you will notice the corpuscles are small, even smaller than the red corpuscles, and are deeper in color. Now, in the æstivo-autumnal fevers we notice the corpuscles unaffected by the parasite, but crenated or spiculated; that is almost characteristic of the æstivo-autumnal fever. What do we find here? We find a hyalin body, but you will have difficulty in distinguishing that it is a hyalin body. We find at these points evidences of what remains of the red corpuscle. The crescentic-shaped ones will gradually become considerably larger than the normal red corpuscle, or in some cases smaller; in this instance it is larger. This is all that remains of the red corpuscle. It has probably been circulating through the blood—they go on through the blood—do not sporulate, and cannot be reinoculated and start up a fever, and might be found for a few months after the case is apparently relieved of its malarial symptoms. This shows more of the ovoid and crescentic shapes; they run hand in hand; this shows a small corpuscle. We know they are small corpuscles, because, if we focus carefully we will find that there is a ring, an edge which can be brought out by careful focusing, existing within the corpuscle. You will find, also, that you will have to focus through a little thin layer of red element. It does not lie upon—it is within the corpuscle itself. If we are fortunate enough to see a case as it is about to rupture, we are positive of our diagnosis. The corpuscle will gradually enlarge; suddenly or slowly it will break at one point, and the contents of the corpuscle will be seen to leave the corpuscle, followed by the other matter of the red corpuscle. That is positive proof that it is an organism within the corpuscle itself, not simply a corpuscle breaking up, that exists in all the varieties. This, while a little faint, shows the crescentic variety very plainly. You

will notice here, however, that you do not find the spiculations, probably because the case has been going on some time, evidences of the paroxysms are over, and this is simply what we have been fortunate to get. This shows the ovoid forms again. Now, we have gone through the three varieties as far as we can demonstrate them. Of course I could show you more slides, but they would be similar to those already thrown upon the screen. We have taken up the growths and the changes of the different varieties. They are all in fresh specimens of blood. We find in staining the specimens, if Lœffler's blue or methylene blue is used with a contrast stain or toluidin blue, we can bring out the different varieties, excluding, however, the hyalin forms.

CAN HOMŒOPATHY CURE MALARIA?

JOSEPH C. GUERNSEY, A.M., M.D., PHILADELPHIA.

Can Homœopathy cure Malaria? Yes.

1. What causes Malaria? We have just witnessed a most interesting and instructive display of the Plasmodium Malariæ* —what is this Plasmodium but a germ! Homœopathy cures other germ diseases—why, then, should it not cure Malaria?

2. Homœopathic literature teems with reported cures of Malaria in all its stages, under all conditions, and irrespective of environment.

3. What is Malaria? That is, what is the Malaria that we, as physicians, have to meet and cure? The question is answered by Hahnemann in his *Organon*, where, Section 6, he declares, "For the physician, the totality of the symptoms alone constitutes the disease." And as a corollary to this proposition he asserts, Section 18, "The totality of the symptoms is the sole indication to the choice of the remedy." Viewing Malaria from this standpoint, it renders the (so-called) disease amenable

* Referring to the demonstration by the Saturday Night Club of Medical Microscopists, with the aid of the electric Micro-projection lantern, showing the Plasmodium Malariæ in its various stages of development.

to treatment perfectly. Viewing Malaria from this standpoint, we have nothing to do with the Plasmodium Malariæ *per se*, but only with the symptoms that present themselves in more or less harmony, and with more or less regularity and fixedness, to produce what is known as Malaria. Thus we have certain well-established phenomena which must appear in order to produce a picture which can be recognized as malaria, *e.g.*, the chill, the fever, the sweat, the periodicity of the paroxysm, etc. On these threads hang groups of symptoms which may, and which do, diverge so widely that in a dozen or more cases of malaria a dozen or more different remedies are required. It is not necessary to search for remedies which will act as antidotes or germicides to the plasmodium malariæ, any more than it is to search for antidotes to the germ of scarlet fever or small-pox, since we have a treatment based upon an absolute law of cure that "the presenting symptoms alone constitute the disease" (as stated above, Section 18). Turn to our rich and certain Materia Medica, noting all the groups of symptoms as revealed in our provings; if a doctor knows how to wield this weapon, he will certainly wipe out the symptoms which are known as Malaria.

In connection with the choice and the administration of the similimum remedy comes a most important consideration, viz., *when* shall the remedy be administered? Shall it be before, or during, or after the paroxysm? Or shall a remedy be chosen and then continuously administered, every few hours, irrespective of any proper time? Dr. Henry N. Guernsey won great success in the treatment of malaria, and his rule was to administer his remedy, a single dose in a high potency, as soon as possible *after* the paroxysm had passed over.

Perhaps the reason *why* the best time to give the remedy is after a paroxysm may be found in the following circumstance.

The malarial germ gains entrance within the red corpuscle, and there it grows, developing pigment granules at the expense of said corpuscle, which it gradually destroys. The malarial paroxysm always coincides with the sporulation of a group of parasites. *Hence, directly after an attack, before new parasites begin to develop, is the proper time to administer the similimum.*

In that valuable book, Jahr's "Forty Years' Practice," the author lays special stress upon the *time* of administering the remedy. He says: "I almost always begin the treatment of a case of intermittent fever with ipecacuanha, unless some other remedy is distinctly indicated. I dissolve three globules of the 30th attenuation, and give a teaspoonful every three hours, *commencing immediately after the chill;* by pursuing this course, I have cured many cases of fever and ague by the first prescription, thus saving myself a good deal of unnecessary seeking and comparing." Ipecacuanha is almost a specific where the symptoms of malaria have been suppressed by quinine. In my own practice, I have found ipecacuanha a most useful remedy in malaria, and especially where, with the chill and fever, there is much gastric distress—nausea and vomiting, or if there is persistent nausea without vomiting—or, though vomiting occurs, the nausea remains unrelieved.

Many able practitioners of our school testify heartily to the efficacy of this remedy in the treatment of Malaria, and H. C. Allen, in his "Therapeutics of Intermittent Fever," says: "Ipecacuanha covers a much larger range of symptoms than quinine." Especially is ipecacuanha to be thought of in cases where a relapse is due to dietetic irregularities—and we must remember that many a convalescent from chills and fever has caused a serious relapse in his case by injudicious diet. I am not discussing the general treatment of Malaria, but I cannot help referring to the necessity of exercising supreme care on the day of paroxysm—I mean, if the chill, fever, sweat, etc., come every third day, the physician must exercise special precaution on that day. In a case of chills and fever, it is highly advisable for the patient to remain in bed as long as any febrile symptoms present themselves; such a procedure renders the attack of shorter duration and of less severity. But where the patient cannot or will not consent to this, it is all important to insist that he keep in bed on the day of the paroxysm, even though he be up and around the "well" days; also he should be warmly clothed on that day, and guarded against every draught of air; let him live on low diet that day; make him avoid all excitement and company on that day, sleeping and lounging as lazily as possible.

Even if the physician has apparently cured the chill, it is well to continue these precautionary measures on the day the chill would otherwise have come, for fully ten days or two weeks. Anyone who is subject to chills and fever should invariably sleep in an upper room—the higher the better.

Sac. lac. is the best remedy to administer if, owing to circumstances, it seems needful to give something immediately to ease that tremendous chill or to cool that burning fever. The physician who knows that Malaria *can* be cured by Homœopathy, and who proposes to cure it by Homœopathy, is very chary about spoiling his case by giving many remedies. He has learned that the proper way is to first get all the symptoms; then he applies his remedy, carefully chosen from the Materia Medica, in accordance with § 235 and § 236, in Hahnemann's *Organon*, where we read, "With respect to intermittent fevers . . . . the best, the most appropriate and serviceable method in these diseases, is to administer the remedy immediately or very shortly after the termination of the paroxysm." I regret that I have not time to read *in extenso* Sections 235 to 244, inclusive, because no physician can truthfully assert that Homœopathy is unable to cure Malaria until he has diligently studied the portion of the *Organon* just referred to and has faithfully applied its precepts to practice.

I well remember the case of a little boy who had a severe attack of chills and fever. His mother drew my attention to the fact that always, when the chill came on, he would creep into her arms—either from the floor or from the bed or from anywhere he might be—would creep into her arms and make her hug him tight to her breast all through the attack. This symptom, which proved to be a "keynote," led to the consideration and administration of Ignatia, when a wonderfully prompt and complete cure resulted. I recall another case, that of a young man who had been camping and fishing on the banks of the Susquehanna. His case proved stubborn, until I learned that he was a "big feeder" (he ate much and ate often) and had many gastric symptoms. I exhibited Ipecacuanha 200, and an immediate cure resulted.

My father once sent me to see a case for him; he said,

"Go over the case carefully, and see if you can find any new symptoms that I have failed to ascertain. If you see your way clear, prescribe; and I hope you will cure her." I visited the patient, found she ate enormous quantities of salt, and gave Natrum Muriaticum 265 m. An immediate cure was the result. Other cases I have had which I have happily cured at the very onset of the attack, where a well-marked chill, fever, sweat, headache, etc., developed and gave me every reason to diagnose Malaria.

I know that in the foregoing remarks I have quoted the experience of many of you; and my only reason for speaking is to encourage some faint-hearted ones, who would like to *cure* their cases instead of partially alleviating or entirely suppressing them.

DISCUSSION.

Dr. B. F. Betts: Just at this time I feel that it will be quite appropriate, and I know I will be voicing the sentiment of the members of the State Society when I thank the Saturday Night Club of Medical Microscopists for their demonstration this evening, and especially Dr. D. Bushrod James, Dr. P. Sharples Hall, as well as Dr. Guernsey.

There was just one thought that came to my mind when we were viewing this demonstration, which was very forcibly presented. Whilst undergoing treatment in Germany this summer a year ago, upon reading the papers I saw that Dr. Koch, of Berlin, had claimed that a great deal of what is called malaria was really due to quinine-toxæmia, and he called it quinine fever, and asserted, as many of you know, perhaps, that this quinine fever is identical in every respect with certain forms of malarial fever, except that the plasmodium malariæ is absent. I believe, if I mistake not, that there can be no better confirmation of the homœopathicity of the administration of quinine for malaria than these observations of Professor Koch. I was about to say that I was under the impression, and still am, that Professor Koch is pursuing his investigations in this line in England; I am not positive, but I am under that impression, that he is working hard in this direction, and it may be through his influence that we shall learn to use quinine in the treatment

of malaria, relying more particularly upon the homœpathic administration of the remedy. There is no doubt at all but what it has been and is still used in too great quantities and in too large doses. Of course, it will not cure every case of malaria. It does not produce all the phases and different varieties of malarial fever without the plasmodium. But we certainly can take encouragement from all these observations of scientists, which confirm the homœopathic law in pursuing our legitimate line of treatment, that is, in prescribing symptomatically, according to symptoms, curing all of these diseases which are dependent on bacteria or from similar influences. I know very well that these influences are developed in a different way, that is, manifested in different ways in different individuals, according to the constitution or according to the conditions of health in which the individuals may be. Therefore, necessarily there must be different varieties, and it stands to reason that one remedy will not cure all cases. We must individualize, and I think if we do, and select a homœopathic remedy, in my experience we do cure these cases of malaria.

Dr. Bushrod W. James: In regard to the application of the homœopathic remedy, and especially in regard to this disease, where we know there is a germ, where that germ grows and develops and propagates, it seems to me that the homœpathic remedy stays in the system in its diluted form, and is that form in which it will make its impression upon the cells, upon the tissue itself, of the blood—the blood being considered a tissue —making its impression, when it goes into the blood, upon those corpuscles directly; and if the remedy is of such a character as to destroy these germs, changing them, altering the tissues so that these germs cannot produce themselves, I do not see why the homœopathic remedy cannot do that. I believe it does, and I believe it does limit the disease by stopping the propagation of the germs, and as we have seen to-night, that explosion in which the immense number of these germs are thrown out. Now, the minute dose of the indicated homœopathic remedy may so change the blood itself when it enters the blood as to enable the corpuscles not to take on this germ-action; that it will destroy the food of the germ, and that the germ will die,

and the disease be cured. I think that the action of the homœopathic remedy is something like the toxic products of some of the germs themselves—the toxic product itself if placed in the system will destroy the germ itself. Why should not the homœopathic remedy that produces symptoms similar to malaria—malarial symptoms—why should not that remedy be the one which would limit the growth and cure the case by putting the blood in a healthy condition, and with the system restored again to its natural state, the malaria will all disappear.

Dr. R. E. Tomlin: I would like to recite an experience, a case of a lady. About six weeks ago she came to me with leucocytosis, and stated that about everybody down where she lived had chills and fever. Every other day there was a very pronounced chill; and she had been having one for a number of weeks. Just that day she had had a very severe chill. She had taken quite considerable quinine. Thinking I would have to resort to quinine, I preferred to wait at least a day, as the chills were only occurring every other day. I gave her two powders of natrum mur. 6x (and a bottle of blank pellets), one on her tongue at the time of her visit and the other to be taken that same evening when she retired. I directed her, on the first indication of an approaching chill, to report. She did not report. The days went by until finally about ten days later she did return, and told me that she had not had any chill—an experience which she had not enjoyed for months. I gave her two more powders, natrum mur. 6x, and another bottle of blank pills, and the woman has not had any indication of chills for six weeks.

Dr. T. S. Dunning: I can confirm Dr. Guernsey's statement with regard to the curability of malarial fever, whether intermittent or remittent forms, with the homœopathic remedy, that is, selected the best I was able to do. I was not able to cure all my cases with homœopathic remedies, closely or carefully selected, but I say ipecacuanha, natrum muriaticum, arsenicosum and nux vomica often did. I have used china. I was opposed to quinine, so that I very seldom used it at all. Young as I was and as little experience as I had, I got a reputation in my neighborhood for curing intermittent fever and malaria, and

the cases from which I got my reputation were those in which I confined myself to the remedy chosen homœopathically and in potencies, sometimes as high as the 30th, but at other times the 2d or 3d. In some cases I was obliged, in order to save the case to myself, to break the paroxysms temporarily with quinine, to give myself time; and I did it without hesitation, without telling them that I was not using homœopathic remedies.

I want to say, furthermore, that the statistics that Dr. Haines gave up-stairs I think are nearer correct than he is inclined to allow. Malarial fever was a much more frequent disease back in the late '70's and early '80's than it is now. When I came here to Philadelphia we had malarial fever every fall. We also had it in the country when I was practicing there—distinct remittent fever of a malarial type, not running the same course or having the same characteristics, and those conditions were common there then. I think they are less so now.

I remember one severe case which I will repeat because of its simple character. A family were all having different forms of malarial fever. They were within a stone's throw of a stagnant mill-pond and the mother had been taken with a fever. She was having it in intermittent paroxysms, and suddenly, one day when I was out there—before I reached there—I found that she was almost as though she had an epileptic seizure, so stupid was she. We selected the remedy, and now I proposed, in addition to these remedies, to give this woman carbolic acid. I had no potency of carbolic acid—it was in 1872 or 1873—but I did have carbolic acid one part in forty. I suggested that we use a half-teaspoonful of that in a tumblerful of water. The next morning before ten o'clock she had recovered sufficiently to take a carriage and go to Philadelphia. You could not say that was typhoid fever, and that she had not recovered from a complete comatose condition, that she could have recovered from that in so many hours. It was true malarial fever, and I want to draw a distinction between them. We had then, and after I came here, a type of malarial fever that would generally run into typhoid fever, unless you were able to control it.

Dr. Pemberton Dudley: I want to say a word or two directly in line with the paper we have just listened to. I be-

lieve that homœopathy can cure intermittent fever, the germ theory to the contrary nevertheless. You never can learn anything about the laws of cure simply by studying the laws of disease. You are out of your province. If you are going to study the principles of astronomy, you must observe the phenomena of the heavenly bodies. If you want to understand the principles that underlie chemical processes you must observe chemical phenomena, and if you want to learn anything about the principles of cure you must study the cure of phenomena. That is Hahnemann's method and the only scientific method, and the only one in conformity with the principles of science in other departments.

Now, I want to ask a few questions. I have not very much to say beyond that. It will be said that malarial fever is a germ disease—one of the class of zymotic germ diseases. But we observe two peculiar things about it; one is that, unlike other germ diseases, it can run an almost indefinite course and continue for an almost indefinite period. Another is that it can get well, to all appearance, very suddenly—in this respect unlike other germ diseases.

Now, there are two or three things to be inferred. One is that if this plasmodium is the cause of the paroxysms, as seems to be the case, and if the greater the travellings of this organic body in the blood-corpuscles the greater the severity of the paroxysms, then it would follow that if you cannot cure the disease except by destroying the parasite, and only by destroying the parasite directly, it would follow that the greater the permanence of the parasite and the greater the severity of the paroxysms, the greater amount of quinine required to cure the patient. The more severe the case the bigger the dose. Now, does clinical experience bear out that proposition? I say there is not a physician in this room but who would say "No." We know very well that with the smallest doses we cure the most severe cases. I contend, therefore, that whatever may be the theory of the matter, quinine, if it cures this disease, does not cure by destroying the parasite as a prerequisite to the process of recovery. I do not mean to say that quinine does not kill the plasmodium. Maybe it does. Admitting that it does, it is

not the way it cures the disease; it cures the disease by some other method. I am not saying what the other method is, but it is logical to believe, it is fair to infer, that if quinine cures the disease, it does not cure the disease by first destroying the parasite.

Dr. J. C. Guernsey: I am glad that two points were brought out in the discussion. The little bugs are very much overrated, and I cannot agree with Dr. James in the least degree that we have to kill the plasmodium before we kill the disease. I agree with Dr. Dudley; I do not care whether that plasmodium lives or not. I do not believe there is a person in this room, if we made a microscopic examination of the buccal cavity, but what we would find typhoid and even germs of the tubercle bacilli. They exist in the blood and mouths of most of us. We do not care anything for them just so long as our system is not in a condition to be poisoned by them. One man is in a receptive state and one is not. If we are in a receptive state we will catch it, but if we are rendered immune by homœopathic means we do not care how much that plasmodium sails around in us. It is not the germ that does the mischief, but the state of receptivity that does the harm.

REPORT OF THE SECTION OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

Osteoma of the Orbit, by C. M. Thomas, M.D.
Nasal Practice, by H. K. Hoy, M.D.
Thrombosis of the Cavernous Sinus, by H. I. Jessup, M.D.
Empyema of the Nasal Accessory Cavities, by G. J. Palen, M.D.
Eye Diseases; their Relation to Nasal Conditions, by H. F. Schantz, M.D.
Nasal Polypus (Myoma), by I. G. Shallcross, M.D.
Adenoids; with a Plea for their Early Removal, by H. S. Weaver, M.D.

OSTEOMA OF THE ORBIT.

C. M. THOMAS, M.D., PHILADELPHIA.

I WILL present a simple verbal report, on account of the lack of time before us, of a rather interesting case of bony growth in the orbit, and I present it as these cases are comparatively rare. There have been perhaps not more than fifty cases of this sort reported, and of the forty or fifty cases I think about 25 or 50 per cent. have died as a result of operation for the removal of the bony growth.

The case that I have to present is that of which I have here photographs. I think it is of some importance, inasmuch as sufficient time has elapsed to show the ultimate result—the final result. It was done a number of years ago, and in the last year I received a photograph of the child showing the appearance of the parts at that time. This was a young girl, as you see here, in her teens, who had shown a gradually increasing protrusion of the eye-ball, forward, downward and outward, increasing until the eye-ball, as you see, was almost out upon the malar bone. The sight having been somewhat marred when the case was brought to me, I diagnosed from the field of resistance a mass behind the ball—the nasal and upper side, with the presence of some sort of a solid growth. I made an incision through the upper lid, covering the line of the orbit,

and, working my way down to the surface of the tumor, I succeeded in bearing down on the surface of the growth and found it occupied almost the entire cavity of the orbit, the tumor lying to the outside. I succeeded after some little time in loosening the tumor from its attachment at the nasal and upper portion of the orbit, and after a long time succeeded in delivering it. It so fully occupied the space of the orbit as to make delivery much more difficult than removing it from its base. That is how it was accomplished, and the eye-ball returned to its natural position, healing taking place very rapidly. In the course of a number of months there was very little deformity and the eyesight returned perfectly.

In this case I succeeded in removing a tumor occupying all the orbital cavity, without doing injury to the eye-ball, and saving not only the ball, but the sight as well.

Of the fatal cases—some eight or ten out of fifty—I think three-fourths of them were those in which the growths had developed on the upper orbital plate, and the cause of death was, as you can imagine, a meningitis. In one case there was a location in the dangerous line in the upper and inner portion, the nasal portion of the upper plate of the orbit.

I have here in these illustrations the photograph of the child, giving the front view—the most important view—showing downward and outward displacements—the growth of the tumor in the upper inner angle of the orbit—the photograph several years after the removal—and illustrations of the tumor itself, anterior and posterior, giving the exact and natural size.

NASAL PRACTICE.

H. K. HOY, M.D., ALTOONA.

NASAL treatment is ofttimes disappointing in its results, and especially so when the pathological conditions present are overlooked or allowed to remain and simple remedies, or such local measures as atomizing, nebulizing, syringing, water spraying, or dry-probe with cotton-cleansing are resorted to. I have known cases where quite eminent physicians have thus treated patients for a long time; and, whatever their apparent success was, the fact remained that the first severe attack of influenza brought about a renewal of former symptoms.

A proper observation of preventive measures would tend to greatly lessen this class of cases. Aside from the care given to general systemic symptoms arising from causes which ultimately lead to chronic catarrhal conditions, a very large majority of patients do nothing until they are, as many state it, "all full of catarrh," and fruit-ripe for the strange specialist, who, whatever else he may do, succeeds in getting a good fee in advance.

In this variable climate, with the hurry and struggle incident to financial success and the procuring of temporal comforts, people in supposed general good health do not observe the care necessary to exempt them from disease. Proper bathing, proper clothing and improper exposure to the elements are matters of indifference until sickness comes on; and, looking upon this often as trivial, the treatment resolves itself into hot whiskey, hot pepper tea, hot lemonade, hot foot-bath and sweating. While in many cases such regimen does do good, in others the foundation is laid for more serious trouble and a physician is called to treat the supposed dangerous malady; but the mere headache, the running nose, the occluded nostrils, the nasal twang, the slight deafness, the mucous hawk—these are not thought to be especially serious, and, with a resort to rock and rye, are allowed to run their course. If, in this stage, a judicious

selection were made among such remedies as *acon.*, *bell.*, *camph.*, *euphrasia*, *fer. phos.*, *kali mur.*, *mercurius*, *puls.*, or *sambucus*, and confinement and rest in a room of proper temperature observed, there would be complete restoration in almost every case.

The foundation, however, being laid for nasal ills to follow, they come in their regular order through the various classifications until the chronic type is assumed, accompanied with the train of hypertrophies, purulent discharges, tumors, and throat and ear complications. The applicant frequently applies for throat treatment or ear treatment—probably deafness. An examination reveals the existence of a nasal catarrhal condition, which is the cause of the disease in the throat or ear. This brings to mind a case of stomach disease, dyspepsia in a very aggravated form, which after years of torture yielded when proper operative measures had been resorted to in the nasal condition. As a statement of the means employed in this case will convey the important idea that in the writer's mind lies at the bottom of successful results in this line of practice, I give it without apology.

The patient is a man of about 40, occupation car poler, exposed to all kinds of weather, day or night.

During September, 1898, he applied for treatment for a severe condition of stomach trouble. The history was one of prolonged catarrh, the breath very offensive and constant issuing of discharge from posterior nares, so that, in the patient's words, the stomach was destroyed. An examination revealed an entire occlusion of right nostril by reason of a deflected septum with hypertrophies. He was advised to have these conditions attended to, but would at that time have nothing done except to take medical treatment. For a time he seemed to improve, but when cold weather came on he got worse and gave up treatment in despair.

For several months he was compelled to abstain from labor, and became a typical physical wreck. In this condition he concluded to follow the advice formerly given and have the nasal deformities corrected. Under an anæsthetic his nasal cavity was dilated as thoroughly as possible by straddling the septum and forcing the blades of the nasal dilator back full length and

applied to its fullest extent at different angles. It was then withdrawn and applied on the closed side, with sufficient force used to fracture the septum, after which a hard-rubber canula was inserted high up and kept there for two weeks. On the third day the patient returned, having blown the canula out. It was at once replaced, and with care upon the patient's part it remained in position sufficiently long to do its work. The rubber canula I think a great improvement over a solid dilator, or packing to keep septum in place, as it allows cleansing, and also room for breathing, which is very comforting to a patient. The after-treatment in this case consisted in the internal use of *arn.* for a few days, followed by *hydrastis* and locally cleansing with dilute peroxide of hydrogen, with occasional use of warm water, slightly salty, applied with a Shoemaker spray to left nostril. In a few days the former was discontinued and a solution was used daily with an atomizer, the solution used consisting of resorcin, dilute non-alcoholic hydrastis and glycerin; the salt-water spray was continued twice daily until the cure was effected.

The cure in this case seems to have been complete. In three weeks the patient was back to hard work, and now, five months later, he is still working full time. His health is excellent, breathing full in both nostrils, and the stomach symptoms have entirely disappeared.

In regard to nasal dilation, I will say that I consider it important in all cases where there are posterior hypertrophies, and obstructions not due to certain kinds of tumors which of themselves require removal. I believe it would be a good thing to dilate after removal of polypus, but in this I have not had experience, as I am not removing these growths by operation lately. Two years ago I presented a paper upon nasal dilatation, and since then I have resorted to this method when occasion called for it and patients consented, but as it is considered something new, many shrink from it. I could instance about thirty cases in which success followed its use. The dilator which I use is one of my own devising, and should any member of this Society feel interested to know more about its use I would be pleased to give information.

THROMBOSIS OF THE CAVERNOUS SINUS.

H. I. JESSUP, M.D., PHILADELPHIA.

In April, 1896, a little child, Ruthana W., æt. 4, was brought to Dr. Thomas's eye clinic at the Hahnemann Hospital Dispensary. The mother stated that since one month she had noticed a yellow color of the pupil of the left eye. Upon examination the vitreous chamber was found to contain a large, yellow mass which trembled with the motions of the eye-ball. No retinal vessels could be seen running over this mass. There was at this time a very slight increase of tension. A diagnosis of glioma of the retina was made (discarding the idea of pseudo-glioma) and enucleation was urged. The mother, however, refused to give her consent, and though warned to bring the child frequently, so we could watch the case, did not visit the dispensary again till November 16, 1896. At this time the left eye was proptosic, divergent and nearly immovable. There was marked ciliary injection, and the cornea presented the peculiar loss of polish and transparency which suggests glaucoma. The cornea was found to be quite insensitive to touch, and on testing the tension of the eye-ball it was found to be *decidedly* increased, being about + 2. At this time I noticed a nasty-looking sore, covered by a scab, on the upper lip just below the left nostril, and from under this scab there was a slight amount of pus exuding. Enucleation was again urged and consented to. Thinking, from the proptosis, that possibly the glioma had burst through the ball and invaded the orbit, an unfavorable prognosis was given. It was further explained to the mother that, even if the growth had not burst out of the ball and invaded the orbit, still the outlook was decidedly bad. In the light of what happened subsequently, this was fortunate.

On November 19th I enucleated the left eye-ball under ether. For thirty-six hours previous to the operation the left eye was flushed carefully every three hours with a boric-acid solution. At the time of the operation the eyebrows, lashes and lids of the left side were thoroughly cleansed with soap and water and

then flushed freely with a solution of $HgCl_2$ 1–4000. The lids were then opened, and the bulbar and palpebral conjunctiva were carefully flushed with the same solution of bichloride. The speculum was then introduced and the ball enucleated in the usual manner, the tumor not having invaded the orbit at all. All bleeding was stopped; and now, feeling, on account of the proptosis that I might possibly be dealing with a case of pseudo-glioma (suppurative choroiditis) in a gliomatous eye, I deemed it advisable to irrigate the socket even more thoroughly with $HgCl_2$ than usual. After this the lids were allowed to close, a compress (wrung out of $HgCl_2$) was placed over the lids, and a roller-bandage was then applied quite firmly. The little one was returned to the ward in good condition. That evening, on entering the ward, I found the child picking the scab on its lip. The same finger was then thrust up under the bandage to the left eye, before I could prevent it, the bandage being somewhat disarranged. On inquiry, the nurse told me the child had torn the bandage off late in the afternoon, and had got her fingers up to the socket before she could be prevented. Fearing infection might have taken place, the lids were opened and the orbit flushed out with $HgCl_2$ 1–2000. A very snug double ocular bandage was then applied, the child's hands were tied down to the bed, and a special nurse was ordered. Instructions were left to flush the orbit three times daily with a solution of bichloride of mercury (1–4000).

The case seemed to progress favorably after this till the 21st, when it was noticed that the left side of the head was slightly œdematous. That night the temperature went to nearly 100°. On the following day one of the hospital residents greatly astonished me by asking me what was the matter with the child's *right* eye. My answer was that nothing ailed that eye. He insisted there must be something wrong, as that morning, in dressing the left orbit, he noticed the lids of O. D. greatly swollen. Going immediately to the ward and removing the dressings, I found the lids of O. D. markedly œdematous, the eye-ball proptosic, immovable, and the iris dilated and fixed. The first thought which suggested itself to my mind was *cellulitis*, but I could not see why we should have this developing.

Suddenly there flashed across my memory the close similarity between the symptoms of cellulitis of the orbit and thrombosis of the cavernous sinus. At the same time I recalled that œdema in the mastoid region occurring with the symptoms I already had was quite pathognomonic of sinus thrombosis. Upon looking for this last sign which was necessary to complete my chain of evidence, I found it markedly present over both mastoid regions. The conclusion was then inevitable that the child had infected the orbital wound and a thrombosis of the ophthalmic rim had ensued. Furthermore, this thrombosis had extended into the cavernous sinus and had produced the appearance of an orbital cellulitis. On this day the temperature ran up rapidly to 103°, between which point and 105° it fluctuated till death. The swelling of the lids and over the mastoid increased very rapidly till it extended over the whole head of the child, appearing like a monstrosity from this excessive enlargement of the head. The remedies used were aconite 3x, bell. 3x and rhus tox. 3x, of course, all to no purpose. The child became delirious, then gradually sank into coma, and died on the evening of the 23d. Although we urged an autopsy, the mother refused, and we were unable to overcome her objections.

The microscopical examination of the growth showed it to be a small, round-celled sarcoma, and further revealed the fact that the growth had extended out of the ball along the optic nerve, so that if death had not occurred as it did, we would in all probability have had recurrence of the growth in the brain, with a necessarily fatal termination.

And now, gentlemen, in closing, I would like to say that this case has taught me to bear in mind the possibility of sores about the face, carious teeth, atrophic rhinitis and blenorrhœa of the lachrymal sac setting up an infection such as the above in any case of enucleation. As a result, we must always remember this possibility and postpone enucleation if possible; or, if this cannot be done, take such steps as will best prevent the possibility of infection.

EMPYEMA OF THE NASAL ACCESSORY CAVITIES.

GILBERT J. PALEN, A.B., M.D., PHILADELPHIA.

THE relations between diseases of the nose and those of the eye, which come daily under the observation of the specialist, are mostly such by which inflammatory processes of the one organ affect the other by direct extension along the mucous membrane, or produce conditions of a reflex nature.

This relation of nasal to eye diseases is still further observed, though less frequently, in closed suppurative conditions of the nasal accessory cavities, a more or less characteristic train of eye symptoms being produced, varying with the severity and extent of the lesion, and with the cavity affected, one symptom of which, however, is more or less constant; I refer to the deviation or displacement of the eye-ball.

Although empyema of the nasal accessory cavities is by no means a rare condition, it is only in a certain class of these cases that deviation of the eye-ball results. This can only occur in cases in which there is no outlet for the secretion, owing to closure of the normal nasal opening by some pathological condition: there being no opening through which the pus can escape, it collects until the cavity is full, further secretion producing mechanical distention of the cavity walls at the point of least resistance; the bone may further become absorbed in the process and the pus break through into the surrounding tissues, the subsequent symptoms depending upon the region invaded.

As above stated, when the cavity becomes enlarged, a bulging takes place at the point of least resistance.

If we examine a number of anatomical specimens, we will find not only a great variation in the size and formation of the nasal accessory cavities, but also the thickness and density of the walls will be found to vary in the different specimens. In the one, the anterior wall may be the thinnest, while in the

next, the anterior wall may be the thickest of all, the posterior wall of the cavity having the thinness of paper.

It is due to this variation in the walls of the accessory cavities that the distention produced by a closed empyema does not always occur at the same point.

Distention of the antrum of Highmore usually takes place inward toward the nasal cavity, downward toward the palate, or upward toward the orbit, producing in the latter case a deviation of the eye-ball.

The frontal sinus may be distended upward toward the brain cavity, or in the direction of the median line, encroaching upon the neighboring sinus, or downward and outward toward the orbit, producing also a deviation of the eye-ball.

It is doubtful if distention of the sphenoidal cavity can result in a deviation or displacement of the eye-ball. In the cases reported, it is probable that the ethmoid was involved, as in a large number of cases the posterior ethmoid cells communicate directly with the cavity of the sphenoid.

Thus far we have considered the accessory cavities which consist of but single cells. We now consider a series of cavities, the so-called ethmoid cells, the majority of which have their own walls and separate outlets into common channels, which unite at the nasal opening to the ethmoid cells—these cells, in turn, being enclosed in the bony walls of the ethmoid, which forms for many of the cells the outer wall.

From this it is evident that an empyema may exist in one or more cells, the remaining cells being perfectly normal; or, we may have an empyema of all the cells. In other words, we may have a circumscript or a diffuse empyema.

In the first case a single cell may become involved; its opening being closed and pus collecting, there results a distention of its walls at the expense of the neighboring cells. Eventually rupture may take place into a neighboring healthy cell, through which the pus will find an outlet into the nasal cavity; or, the nasal orifices being closed, the walls of the separate cells may be broken down and the cells be converted into one cavity, further distention occurring at the point of least resistance, be it posteriorly toward the sphenoid, inward toward the nose, up-

ward toward the brain cavity, or outward, in the latter case a bulging of the os planum resulting, and producing a deviation of the eye-ball.

I have said that it is only when the outlet to a nasal accessory cavity has become closed that an empyema can result in a distention of the cavity walls; that this distention takes place toward the orbit only in a small percentage of these cases, is proven by the comparatively few cases reported.

Simple bulging of the orbital wall will produce, first, deviation or displacement of the eye-ball, the direction depending upon the cavity affected; and, further, exophthalmus, œdema, double vision, etc.

I recall a case which I examined in Professor Hirschberg's Polyclinic in Berlin.

Patient aged 19 years. The day before, on arising, he noticed that his left eye protruded considerably, and that he saw double.

He had suffered for two years with severe headache, hindered nasal breathing and profuse yellowish discharge from the left nostril, the latter having ceased two months prior to his visit to the dispensary, and he had been operated twice, the first time for polypus and the second time for hypertrophy of the left inferior turbinated.

On examination of the left eye there was found pronounced exophthalmus, ptosis, œdema of the eyelid, deviation of the eye outward and downward, with limited motion inward: further, crossed diplopia.

With 2 D his vision was $\frac{5}{10}$.

The optic disc was slightly swollen, its outlines indistinct, and the veins tortuous and slightly engorged.

The right eye, with the exception of a slight myopia, was in every way normal.

Upon deep palpation in the inner angle of the orbit, a soft, somewhat sensitive tumor was found.

A thorough examination of the nose was made, and the ethmoid cells found to be diseased. The operation was followed by a profuse flow of pus.

Two days after the operation I saw the patient again. The

exophthalmus, ptosis and œdema of the eyelids were markedly less, the movement of the eye-ball in, less limited, and the eye no longer deviated; the patient did not complain of double vision, and an exact examination proved the absence of double images. The optic disc was found less swollen and its outlines more distinct.

At the last examination, two months after the operation, the eye was found normal, with the exception of a slight haziness of the optic disc.

This case is one characteristic of empyema of the ethmoid cells. According to Moritz-Schmidt, often the first indication of a closed empyema of these structures is a deviation of the eye outward and downward, with double vision.

In these cases of closed empyema of the nasal accessory cavities, resulting in a deviation of the eye-ball, etc., the prognosis is favorable in those cases where the condition is early recognized and the case at once operated.

The symptoms will, as in the case cited, disappear, and the eye return again to its normal condition in the great majority of cases.

NASAL POLYPUS (MYXOMA).

I. G. SHALLCROSS, M.D., PHILADELPHIA.

THE myxoma is by far the most common variety of benign neoplasm found in the nasal cavities. Our knowledge of the process that precedes polypus formation is very vague. Bosworth says: "It is difficult to assign any definite cause for the occurrence of mucous polypi." They start as sessile tumors, and generally from the middle turbinated bodies, the mucous membrane of which is soft and delicate, and actively concerned in the respiratory function of the nose, viz., serous exosmosis. Consequently the conclusions of the above-mentioned authority that "as a result of this serous transudation the membrane becomes saturated or water-soaked, as it were, in such a manner as to lead to the development of this peculiar myxomatous con-

dition." The polyp, being developed as a sessile tumor, is then subject to the action of gravitation, which, together with the traction produced by blowing the nose and the to and fro motion of breathing, causes it to gradually sag down and become filled with serum. They now drag on their attachment above, and a pedunculated tumor is in this manner formed.

Woakes asserts the invariable association of nasal polypi with necrosing ethmoiditis; but here differing with this author, I must agree with Ivins, who says: "I must confess to very rarely finding this relationship, but believe such ethmoidal changes the result, not the cause, of the neoplasm."

Mucous polypi are more frequently found in males than in females. They are very rare in early child-life, seldom making their appearance before adolescence. They are probably most common between the ages of twenty and thirty years. Lennox Browne is of the opinion that they may occur during any period of life. I have seen the mucous polyp in a patient nearly eighty years old, and removed one from a boy of nine years. Heredity has been cited as a cause of these growths, but I am inclined to believe, where two or more cases occur in the same family, that the fact is a mere coincidence.

The external surface of a polyp is covered with the epithelial layer lining the mucous membrane of the nasal passage, the epithelium being frequently of the ciliated variety. Immediately under this is a layer of fibrous tissue which contains the tumor proper, a true hypertrophy of the structures of the mucous membrane, namely, fibres of connective tissue, a large amount of mucous- and fat-cells, glandular tissue and blood-vessels. In shape they resemble a pear, and vary in size from a mere pin-point to the entire capacity of the nasal cavity. In color they are a pinkish or bluish-pearl. They are generally attached to the middle turbinated bone or its adjacent tissue. I have removed true mucous polypi from nearly every portion of the nasal chamber, including the septum and inferior turbinated, although in the former position the tumor is most likely to be an angio myxoma, and in the latter it usually presents itself as a polypoid degeneration.

The first symptoms of nasal polypi are sneezing and a pro-

fuse watery discharge; the latter from the mucous membrane, not the polyp. As the growth develops in size, nasal stenosis appears; most marked at first in the upper part of the passage, causing a sense of fullness and distention, which is often more distressing in the nervous irritability which it causes than if the obstruction were in the lower respiratory region, which region becomes totally closed in many cases as the growths enlarge. They usually start in one fossa, but almost invariably develop in the other in a short time. The stenosis varies notably under atmospheric conditions; thus we find it of greater degree during damp or rainy weather. This is undoubtedly due to the hygroscopic character of the growth, although Bosworth claims it is due to the mucous membrane entirely. The voice is markedly nasal, or, more properly speaking, is devoid of nasal resonance; and an experienced rhinologist will often suspect the nature of the case from this characteristic voice. In severe cases the nasal bones are often displaced, due to the lateral pressure exerted by the growths, giving the characteristic appearance euphoniously designated frog-face. Polypoid growths very frequently give rise to epiphora by obstruction of the mouth of the nasal duct, and they occasionally seem to cause disease of the antrum of Highmore by occlusion of its orifice or invasion of its cavity. I have also seen empyema of the frontal sinus, due to obstruction by a polyp. In addition to the above symptoms of nasal polypi, there is a characteristic profuse discharge of thick mucus having a musty, pungent odor. Anosmia is an almost constant accompaniment of the condition, but is most marked where pressure is exerted in the olfactory region. The sense of taste is also at times seriously impaired. The aural symptoms are directly due to stenosis and interference with the normal respiration, and consist mainly in the development of chronic catarrhal otitis media. The patient being of necessity a mouth-breather, irritability of the pharynx and larynx is to be expected, and is usually pronounced. Reflex headache, cough, or asthma are frequently relieved by the removal of a polyp situated high up in the nasal fossa.

The diagnosis of nasal polypi is, as a rule, easy; a grayish-

blue or pink tumor, freely movable when large; easily indented with the probe, the indentation disappearing quickly on the removal of the probe; and the general health of the patient, as a rule, perfect.

When the tumor is small, or situated far back or high in the nose, cocaine or a fresh solution of the desiccated suprarenals should be used; the collapse of the erectile tissue of the inferior turbinated greatly facilitating the examination. Frequently, small polypi are situated in the middle meatus, the middle turbinated hiding the tumor. In these cases the polyp can frequently be thrown out of its bed and brought into view by employing a bent probe in the middle meatus.

Frequently polypi are attached so far back on the middle turbinated as to require a posterior rhinoscopic examination to detect them; and occasionally they hang well down in the naso-pharyngeal region.

When a true hypertrophy of the turbinated exists, diagnosis of small growths may be rendered quite difficult; the tissue not responding to the action of cocaine or the desiccated suprarenals, as it does in the case of a simple turgescence or pseudo-hypertrophy.

Papilloma on the inferior turbinated is easily distinguished from a polyp by its red color, and presents no difficulty in diagnosis. Angiomata are found more frequently on the septum; they have a broad base, are of a deep-blue or purplish-red color, and bleed easily. Fibromata are hard and offer resistance to the probe, and in color they are white, although they are more highly vascular than the simple myxomata. The cystic polyp is more translucent and has more the appearance of a bag of water.

The prognosis is distinctly favorable, although anosmia and frog-face are at times permanent. There is a decided tendency to recurrence of the growth, either at the same attachment or in adjacent structure. Examples of degeneration of polypi into sarcomata or carcinomata are reported. Most of these cases follow clumsy operating. I am of the opinion that had many, if not all, of these cases been examined microscopically, the cancer-cell would have been found in the earliest manifestation of the disease.

Although remedies have their place in the treatment of nasal polypi, I doubt if they alone ever cure a case of this disease. I have tried them and have unquestionably held cases in check, but have never seen a cure from purely medicinal treatment. *Calc. carb.* has been my best remedy when persistently used. *Sang. canad.* should be used after operating, as it seems to prevent recurrence. *Hydrastis* is often a good remedy when used for the catarrhal symptoms. *Calc. phosph.*, *kali nit.*, *thuja*, *conium*, *ferrum*, *phosp.*, *kali bicrhom.*, *sulphur* and *teucrium* have all been used in these cases. The use of acids injected into the tumors I must condemn, as they leave a sloughing mass in the nostril for many days and may be the cause of septic poisoning. Electrolysis has been advocated but is not generally employed by rhinologists, as the results are slow and uncertain. The old-fashioned method of removing polypi by means of the polyp forceps and without proper view of the seat of operation is now almost obsolete. There can, however, be no rational objection to the use of the alligator-jaw, angular forceps, when the part is well illuminated and the attachment of the growth can be easily grasped. Most surgeons prefer to use the cold wire snare; the instruments devised by Jarvis, Bosworth and Sajous are now in general use. For my own use I prefer the Bosworth or Weaver modification of Sajous' snare. Before any operation in the nasal fossa the parts should be thoroughly cleansed with an antiseptic alkaline solution, after which we may make two or three applications of a fresh solution of the desiccated suprarenals (10 to 15 grains to ʒj) to the turbinateds and seat of operation; the action of this drug giving us practically a bloodless operation and allowing more room for the employment of instruments. As it does not control pain, we must follow its use by one or two applications of a 4 per cent. solution of cocaine before commencing the operation. The medium-size piano-wire should be used in the snare. As large a loop as possible is introduced along the septum vertically so that the wire passes the tumor; it is then turned horizontally and made to encircle the tumor, and as it is pressed up toward the point of attachment the wire may be slightly tightened until it is made to grasp the pedicle at its attachment. The

wire may now be tightened around the pedicle, and with a twisting motion of the hand the mass pulled off, or by drawing the wire home it may be made to cut through the pedicle at its base. By the former method we have more bleeding and more pain, but are less likely to leave a stump of the polyp remaining in the nose than by the latter procedure. We should remove as many tumors as possible from one fossa at the first sitting, and repeat the operation every week or ten days until both nares are completely clear. Bleeding may be quite profuse after operating but it is easily controlled, and in my experience has never been alarming. It is advised to always cauterize the point of former attachment after the removal, so as to prevent recurrence. In my experience the growths have returned even after a careful attempt has been made to cauterize all raw surfaces. On the day of operation it is almost impossible to carefully cauterize because of the hæmorrhage, and I quite agree with Bosworth that it is impossible to find the point of attachment if the polyp has been properly cut off close at its base.

The galvano-cautery snare is more painful than the cold wire and is placed in position with much greater difficulty, owing to the flexible nature of the platinum wire. The use of powdered sanguinaria root as a snuff has been advocated by some, to prevent recurrence. My own opinion is, that the best preventive measure is careful attention to the condition of the nasal mucous membrane, with the correction of any deformity that may exist within the nasal cavities.

After the complete removal of all nasal polypi the case should be carefully watched and examined every few months for possible recurrences. Should these occur, they should speedily be removed and careful watch of the nasal fossæ kept up until we are assured of the cure of the condition.

EYE DISEASES: THEIR RELATION TO NASAL CONDITIONS.

H. F. SCHANTZ, M.D., READING.

Pathological conditions of the nose frequently cause or aggravate eye diseases. To secure good results in the treatment of the diseases of the eye the examination and treatment of the case must not be limited to the eye alone, for the condition of the nose is a frequent source of irritation, and may, if uncorrected, prolong the recovery of the patient.

We all recognize the direct anatomical connection between the eye and nose. The nasal duct is a direct channel connecting these two organs of special sense, and is lined with the same kind of mucous membrane as that which covers the globe of the eye and the eyelids and lines the nasal cavities. There is also a common arterial venous and nervous supply.

Through the nasal duct we have a direct route for the passage of morbific germs from the nose to the eye, and the nose may thus become a source of irritation to the ocular symptoms. The direct arterial and nervous connection makes it possible for mechanical or pathological conditions existing in the nose to produce a diseased condition of the eye.

It is often impossible to distinguish between symptoms that might be classed as nasal reflexes and those due to vascular and other influences.

In lachrymal disease the influence of coexisting nasal disease is marked; for anything which will obstruct the nasal orifice of the duct, or by pressure diminish the calibre of the tube, will interfere with the function of the duct, and inflammation of the lachrymal sac with formation of stricture of the duct will follow, and epiphora be developed.

Nasal polypi, if so situated as to form a wedge between the septum and the inferior turbinal, or between the septum and the superior turbinal, give rise to ocular symptoms.

Deflected septum or large spurs on the septum play an important part in the causation of sympathetic ocular conditions.

The ready access of infectious germs to the eye from the nose through the nasal duct renders the eye liable to attack in ozena and hypertrophic rhinitis with excessive secretion.

The inferior meatus beneath the inferior turbinal is the receptacle for the collection of material which is or becomes decomposed and finds its way into the lachrymal sac and thence to the conjunctiva, and we have a conjunctivitis, phlyctenular keratitis, or ulcer of the cornea, which will not yield to treatment until the origin of the trouble in the nasal condition is corrected.

Another common nasal condition affecting the eye is chronic hypertrophic rhinitis, which may cause burning pains in the lids or globe of the eye, photophobia, lachrymation, narrowing of the palpebral opening from blepharospasm, and ciliary and conjunctival congestion.

Adenoids in the naso-pharynx are often present in children suffering with phlyctenular inflammation of the eye.

The two cases which I describe are merely to show the importance of treating the associated nasal conditions in patients presenting themselves complaining of eye diseases.

Case I.—F. L. came to me with this history: For a number of years he had complained of photophobia, lachrymation, sneezing, headaches, and asthenopia. He had consulted several oculists, and in a period of two years his lenses were changed three times. After testing his refraction and finding no reason to change the lenses which he was wearing, I inquired more fully into the nasal symptoms, made an examination of his nose, and found a slight chronic hypertrophic rhinitis. Prescribed kali bichromicum 3x, and gave him an alkaline douche and a camphor–menthol–albolene solution for use in a nebulizer. In a few weeks he again reported, showing marked improvement. I continued the treatment, and he is now completely relieved of the annoying eye symptoms.

Case II.—May N., aet. 7, had suffered with recurrent attacks of phlyctenular keratitis for two years. She came with the usual

drooping of the head to protect the eyes from the light; the face red and irritated from the thin and excoriating lachrymation, the lid-edges red and sore. I prescribed atropine solution gr. iv--oz. j, dark glasses, and graphites 3x. In a week there was no improvement. Then, examining the nose carefully, I found adenoid vegetations, which were removed: and, continuing my cleansing solutions to the nose along with my remedies for the eye, I succeeded in correcting the annoying ocular symptoms.

ON THE METHODS OF SECURING ANTISEPSIS IN CORNEAL OPERATIONS.

G. W. STEWART, M.D., PHILADELPHIA.

It is somewhat surprising, in view of the vast revolutionary stride but recently achieved by modern surgery,—a stride made possible only by the perfection of an antiseptic technique,—that the question of a safe, prompt and efficient method of securing antisepsis in ophthalmic operations is as yet, in a measure, undetermined. That the conjunctival sac contains bacteria, inordinate both in number and variety, is definitely understood. That in corneal operations their removal is a necessary *sine qua non* is likewise undisputed; but the adoption of a method most reliable and certain in securing this desirable condition remains unaccomplished, as evinced by the total want of unanimity on the subject by writers and operators the world over. The reasons for this uncertain attitude are not difficult to ascertain. From our present state of knowledge, perfect asepsis can only be achieved by the employment of either chemical or thermic means. In the choice of any one particular agent, its effect in known germicidal strength upon the various tissues must first be accurately observed. The differences in susceptibility to irritation between the skin and mucous membranes and between mucous membranes of different regions must be carefully studied. The dangers resulting from actual chemical change within the tissues or the inducing of destructive inflammations are effects of the gravest importance.

All antiseptic agents in minimum germicidal strength are irritating in some degree, and on some structures more so than others; diluted or weakened beyond their germicidal power, their efficiency in the production of asepsis falls distinctly below that of boiled water.

In general surgery the chief object is to obtain a sterile surface at the site of the operation. This can be very effectively secured by vigorous scrubbing, and by the employment of one or more of the various antiseptic agents at command. The production of a moderate irritation, or even slight cutaneous destruction, is by no means a formidable menace to success. In ophthalmic surgery, however, the reverse obtains. Vigorous scrubbing is obviously inconsistent, the selection of antiseptic agents is reduced to one or two, and even these must be diluted to a germicidal strength of questionable utility, to insure against undue reaction.

The obstacles, therefore, in the way of securing a perfect asepsis in the eye by means of the ordinary antiseptic measures are admittedly very great. The conjunctival and corneal structures exhibit a remarkable tendency to react from contact even with the mildest and safest dilutions of the most reliable chemical antiseptics; and, when it is considered that even slight irritations not unfrequently present serious impediments in the course of corneal repair, the importance of excluding every agent that is liable to induce reaction to any great extent must not be underrated.

That effort has been constantly and systematically directed towards the discovery of more perfect measures there is no denying, with the result, moreover, of an excessively gratifying reduction in the visual mortality. To what extent this result may be due—whether to a more perfect cleanliness rather than to germicidal agents—remains to be considered.

Among the usually employed chemical disinfectants, bichloride of mercury ranks pre-eminently as the one most universally in use. I am convinced, however, that its utilization in ophthalmic surgery is based, in a certain sense, more upon a long familiarity with its antiseptic properties and extensive employment in operations on other regions of the body than

upon a conviction of its sound practical value in corneal surgery. Experiments have conclusively demonstrated that the most frequently employed solutions of bichloride of mercury under all conditions do not manifest constant germicidal powers. Its action, ofttimes, is merely to inhibit germ-growth —an action the value of which is as yet practically undemonstrated. Its inefficiency as a cutaneous germicide, even after immersion for twelve minutes in a solution so strong as 1–500, can with sufficient accuracy be shown. That it unites chemically with the tissue albumins to form the albuminate of mercury is well known, which, while it may inhibit germ-growth by encapsulation, becomes likewise a factor in the establishment of distressing irritation. Its value as an antiseptic depends entirely upon the strength of the solution, and in a solution sufficiently strong to exhibit its germicidal powers its irritant powers are inevitably manifested.

From the experiments of Geppert, Behring, Schill, Abbott, Fischer and others, we are taught that certain of the staphylococci resist the influence of a 1–3000 hot solution of the sublimate for more than twenty-five minutes, and that others are not always destroyed even after subjection to a 1–1000 solution for fifteen minutes. While weaker solutions may undoubtedly possess germ-destroying powers, a proportionate length of time in which to exhibit their action is necessarily imposed, and this, it has been shown, extends over periods ranging from minutes to days. Finally, solutions of bichloride of mercury weakened to 1–10,000, when brought in contact with fresh wounds invariably cause a well-defined necrosis, easy of determination under the microscope.

Concerning other disinfecting agents, such as chlorine water, formaline, cyanide of mercury, Panas' solution of biniodide of mercury, etc., not generally in use, but still employed by some operators, there is little to be said, inasmuch as they have all been found distinctly irritating in strengths sufficient to procure antisepsis, or of no practical value as germicides for ophthalmic purposes when weakened to a moderate degree of safety.

Presuming an operation on the cornea to have been performed with the requisite degree of skill and knowledge, there

yet remains, between absolute failure and success in some degree, the all-important and essential requisite, to wit: a prompt and early union of the corneal wound.

Before the theory of asepsis became converted into an axiom, the ever imminent and constantly interposing contingencies in the way of this desirable issue were difficult, if not, indeed, impossible to surmount. With the evolution and adoption of methods for securing antisepsis, fear of these contingencies has given place to a reasonable confidence and assurance of success. All things being equal, the primary union of a corneal wound, without undue reaction, can almost with absolute certainty be predicated.

The exact *rôle* enacted by chemical germicides in this extraordinary progress in ocular surgery is not difficult to ascertain if the foregoing statements concerning their action be carefully analyzed.

It has been definitely determined that germicides in general, and corrosive sublimate in particular, are valuable as antiseptics only in solutions of known strength sufficient to destroy or inhibit the growth of pyogenic organisms. Such solutions, while available in other regions, cannot with impunity be instilled into the conjunctival sac, even in minimized intensity, without the dangers of resulting irritation; and, furthermore, solutions of minimum strength, if not irritating, are certain to become powerless as germicides by copious dilution with the lachrymal secretions.

It becomes, therefore, abundantly evident that ocular asepsis can never be even comparatively secured through reliance solely upon solutions of the chemical disinfectants.

An additional deterrent to the employment of sublimate solutions resides in the *certainty* of microscopic necrosis ensuing when it is presented to fresh surfaces. Unlike the possibilities of simple irritation, this danger is not minimized by the strength of the solution. While the presence of such necrotic tissue may not actually prevent the union of a corneal incision, the perils of delay and hindrance set up by its presence are sufficiently adequate to absolutely disqualify its use.

The common practice among many surgeons, notably those

of New York, of instilling a solution of 1–5000 bichloride of mercury immediately prior to cataract extraction, is mentioned only to be unhesitatingly condemned.

There being no known means whereby the conjunctival sac can be rendered completely germ-free, ophthalmic surgery must perforce of necessity content itself with only an approximation to a perfectly aseptic state. Chemical disinfectants being excluded for the reasons enumerated, a serviceable asepsis is achieved only by means of copious irrigation with sterilized solutions unirritating in quality, of which the salt (sodium chloride) solution 0.6 per cent. is infinitely to be preferred. This, combined with a gentle wiping of the everted lids and adjacent conjunctival structures, so diminishes the number of bacteria present as to render the danger of wound infection from this source practically nil.

The possible danger of wound infection, however, is by no means eliminated when an approximately aseptic state of the conjunctiva is all that is attempted. There still remains to be disinfected the external integument, brow, margins of the lids and lashes, canaliculi, lachrymal sac, instruments, dressings, the hands and person of the operator and assistants, pillows, towels, etc.; in short, the all-inclusive environment of the patient before, during and subsequent to the operation should receive the most searching antiseptic treatment, to avoid carrying infection into the wound. Only after this has been scientifically accomplished can we talk or write of aseptic surgery in relation to corneal operations.

The methods employed for this purpose are the very accurate ones commonly in vogue, and are too well known to require discussing.

The treatment of cutting-instruments obviously necessitates the utmost care and precision, inasmuch as their delicate edges are readily damaged by subjecting them to the process ordinarily employed for the sterilization of instruments. Plunging them momentarily into boiling water, subsequently in alcohol, and scrupulously cleansing them with sterile cotton dipped in alcohol, will suffice to render them perfectly aseptic and preserve unimpared their cutting-edges.

Again, as a source of infection, the lachrymal duct is too frequently overlooked. With the dressings applied after operation, the puncta are more inverted and brought into closer relation with the corneal wound. Should undue reaction ensue, the lachrymal and conjunctival secretions become temporarily checked, and drainage through the canaliculi is thereby suspended. Under these circumstances the direction of drainage may easily become reversed, and the eye receive back again a multitude of infectious germs that under ordinary conditions are being continuously flushed into the lachrymal sac. Thorough disinfection of the sac before operation suggests itself, therefore, as a simple and logical procedure, to prevent the introduction of infection from this fertile source.

To recapitulate: An ideally perfect aseptic state of the conjunctival sac is impossible to obtain. Chemical germicides are absolutely valueless, *as* such, in strength that may with safety be employed in corneal operations. The inevitable necrosis on the surface of fresh wounds following exposure to the influence of sublimate solutions in *any* strength imperatively excludes its employment during the making or healing of corneal wounds. An *approximate* asepsis of the conjunctival sac can with certainty and safety be obtained by thorough and liberal irrigation with sterilized salt solution. A rigid and painstaking antiseptic technique should attend the performance of all operations on the cornea.

In conclusion: To many it may seem rather an exaggeration of the danger, to reopen the discussion of antisepsis at this late date, and urge the plea for more stringent precautionary measures. Some very recent observations in Continental Europe convince me, however, that carelessness, and inaccuracy respecting ocular asepsis can supersede sound judgment, even in high places.

ADENOID VEGETATIONS AND A PLEA FOR THEIR EARLY REMOVAL.

H. S. WEAVER, M.D., PHILADELPHIA.

"ADENOID vegetations" is the common term used to describe a true hypertrophy of the normal lymphoid structures in the vault of the pharynx and adjacent parts.

This glandular hypertrophy is essentially a disease of childhood, occurring usually between the ages of four and twelve years.

Tuberculosis, syphilis and scrofula all predispose to this affection; probably the tubercular or scrofulous diathesis is more frequently found, and with it the tendency to glandular involvement in all parts of the body, giving rise to the malnutrition and lack of development so characteristic of adenoid disease. Heredity no doubt is an important factor in the ætiology of this affection—often several cases occurring in the same family, due, in all probability, to the inherited diathesis, or possibly to exposure to the same unsanitary conditions.

This tendency to hypertrophy, the result of inflammatory changes under the stimulus of oft-repeated colds, occurs more frequently in children because all glandular structures are more prone to these morbid changes in early youth. Occasionally it is found in young babies, and not infrequently in young adults. I saw one case in a babe of three months which presented the identical symptoms of inherited syphilis, with the characteristic nose involvement found at that age. No specific history could be obtained, and a digital examination of the naso-pharynx revealed the presence of a number of adenoid vegetations.

When these hypertrophies occur in young adults, I believe they have existed in the majority of cases since childhood, and only under the stimulus of some inflammatory process in this region has the hypertrophy increased to a sufficient size to cause distress, and upon making an examination the true condition is recognized.

The exanthemata have a great tendency to produce inflammatory changes in these parts, and consequently ofttimes give rise to the starting-point of this hypertrophy, or, if this hypertrophy be present, stimulate the process with renewed energy.

Adenoid vegetations may occur with or without nasal complications, although ordinarily there is associated with it a hypertrophic rhinitis with a true or pseudo-hypertrophy of the lower turbinated bodies; this is due to the repeated acute catarrhal colds which at times are the only symptoms that lead to a consultation with a physician.

The pathology consists of a hypertrophy of the normal histological elements of the mucosa in the vault of the pharynx and adjacent parts. The adenoid hypertrophy differs from that of the faucial tonsils chiefly in having less connective tissue, and consequently is much softer and more prone to atrophy after puberty. The tissue under the microscope shows a covering of stratified columnar epithelium more or less deprived of ciliæ, with deep furrows, which gives the mass a lobulated appearance. "These masses are made up of lymphoid cells, arranged in the usual node form, with internodal areas sparsely supplied with a low grade of connective tissue, which, however, has a fairly abundant blood supply." The soft, jelly-like consistency is due to the preponderance of lymphoid cells, and is familiarly spoken of as "feeling like a bunch of earth-worms."

Probably the most striking symptom is the pinched facial expression so characteristic of adenoid disease, the open mouth, shortened upper lip, with lines running from the alæ nasi to the corners of the mouth, protruding incisors, a broadening and flattening of the nose, and dulled expression from the eyes. These symptoms, which are almost pathognomonic of this disease, are not so detrimental to the life and development of the child as the deleterious effects adenoids have on the nervous system. The depressing influences caused by pressure on the nerve-endings in the vault of the pharynx by these abnormal growths is quite severe, rendering the child nervous, sleepless, with sudden starting during sleep as though from troubled dreams; consequently the child is delicate, pale, undeveloped, with small appetite, and in a favorable condition to contract any acute disease with which it may come in contact.

Most of the ear conditions found in children under twelve years are, I believe, referable to disease found in the post-nasal space, chiefly lymphoid hypertrophy of the pharyngeal tonsil. These ear complications develop so insidiously that they are often overlooked. If they are not promptly recognized and careful treatment instituted, the child is in great danger of impairment or permanent loss of one of its most important faculties. The symptoms are mostly a chronic catarrhal otitis, or a chronic purulent otitis with acute exacerbations; the former resulting from a simple hyperæmia or congestion of the mucous membrane of the Eustachian tube and middle ear, and the latter from a more extended inflammatory action on the membranes and deeper tissues of these organs.

This hyperæmia and inflammation of the mucous membrane is caused, in the majority of cases, by a deficient nasal respiration, or an obstruction to or pressure upon the Eustachian orifices, with consequent rarefaction of the air in these parts. If these symptoms are not promptly relieved, the patient develops a retracted membrana tympani, and later atrophy of the same, with anchylosis of some of the ossicles, causing a permanent impairment of the organ. Discharge of a muco-pus is a prominent symptom, and it is frequently swallowed because of the post-nasal occlusion.

An alteration in the voice becomes apparent, the extent depending upon the size and location of the growth. It is characterized as a dead, non-resonant voice, with marked nasal intonations, similar to the voice of one suffering from a severe cold in the head. To have a clear, ringing voice in all the registers one must have a clear, normal larynx, pharynx, naso-pharynx and nasal fossa; and for pure tones in the middle or speaking register, the dome or arch of the upper pharynx must be symmetrical, hard and resonant. In adenoid disease these growths destroy the contour of the pharynx, and present a flabby mass, irregular in shape, with little or no resonant qualities; consequently the voice becomes the dead, unnatural one so characteristic of this disease.

Mouth breathing is a prominent symptom, found in most cases constantly, and in others only at night, or during acute

colds. When the growth is small, and the nasal obstruction not marked, the voluntary muscular action will enable normal nasal respiration during working hours; but from the relaxing influences of sleep the muscular effect is decreased, the breathing becomes labored, and the mouth opens to allow the freest possible passage for the air to enter the lungs.

The mouth breathing is the difficult thing to overcome after operation, unless performed quite early, before the habit is so firmly established; otherwise, some mechanical device must be used to aid the passage of air through the natural channels until the normal respiratory function is re-established.

The facial expression, deafness, discharge, altered voice, mouth breathing, cough, and delicate, illy-nurtured constitution of the child will ordinarily be sufficient for a correct diagnosis, but a positive one cannot be made until a digital or rhinoscopic examination is made, revealing to the finger or the eye the presence of the growth. In young children it is difficult, and at times impossible, to obtain a satisfactory view of the vault by the rhinoscopic mirror; so a digital examination is necessary, first, to make a positive diagnosis, and, second, to determine the size and location of the growth.

By the rhinoscopic mirror a good view of the vault and its contents may be obtained, providing the patient has sufficient control of the throat-muscles to relax the soft palate. To accomplish this the tongue is depressed and the mirror placed well back and low down on the base of the tongue, bringing into view the posterior wall of the pharynx. The handle of the mirror is gradually lowered, bringing progressively into view the surface of the vault until the anterior portion is reached, revealing the nasal septum. The vault will present, instead of a round, dome-like cavity, an irregular, reddish-gray mass, hanging down, and to some degree obstructing the view of the nasal cavities posteriorly. In a number of cases the mass is adherent to the Eustachian cushions, presenting an irregular surface, with deep furrows running antero-posteriorly through it. The lower pharynx almost invariably discloses a condition of chronic follicular pharyngitis. In nearly all cases of adenoid disease there is associated with it a hypertrophy of the faucial tonsils.

The treatment of adenoids should be instituted early, and the parents told of the many dangers to which the child is subjected should this be delayed or neglected. The underlying diathesis should be sought and remedied; the general health must be sustained by nourishing foods, fresh air, a moderate amount of exercise, and tonics which will aid tissue formation.

Remedies are of undoubted service, and will sometimes cure, or at least relieve, many of the symptoms; but their action is slow, and they should not be relied upon solely when the normal functions of the adjacent organs are interfered with, because a delay sufficiently long to obtain a remedial action may cause permanent injury to or loss of these functions. When selecting the internal remedies, the totality of the symptoms and the pathological condition should be taken into consideration. Those chiefly indicated are: calc. phos., calc. iod., sang. can., iodine, silicea, kali mur., kali sulph., and baryta iod.

The local applications to the vault will relieve many of the distressing symptoms, and at times permanently decrease the growth, but the milder ones only are applicable, because of the danger of the preparation coming in contact with the surrounding parts. Chromic acid should not be used unless the rhinoscopic mirror and a protected probe be used to place it accurately on the growth. The galvano cautery is a more efficient means of treatment, but only applicable in adults where a good view of the naso-pharynx can be obtained. Great care should be exercised in its use. First the growth must be cocainized, then, by the aid of the rhinoscope, the blade of a bent electrode placed in position cold, and the current turned on, making two or three punctures at one sitting; this should not be repeated in less than a week or ten days.

In the great majority of cases the most satisfactory treatment is the complete removal of the adenoid tissue by surgical procedure, the time of the operation depending upon the condition of the patient.

In children and very nervous adults the operation is best performed under a general anæsthetic, not allowing the patient to be so completely under its influence as to abolish all the reflexes, thus reducing to a minimum the danger of asphyxia

from inspiration of blood into the larynx. With children, where there are no contra-indications, I prefer chloroform, because of the lessened mucous secretion.

There are numerous methods and devices for the removal of these exuberant granulations, which are all applicable in given cases. The nail on the index finger of the operator is all that is necessary in many young patients, where the growth is soft and friable. The artificial finger-tip is useful, but must be used with greater care than the natural nail, because of the absence of the delicate sense of touch, which increases the possibility of injury to the surrounding structures. In the operation as ordinarily performed the patient is anæsthetized, the shoulders are raised, the head slightly dependent, preventing the flow of blood into the pharynx, and later being drawn into the larynx by inspiration; the mouth-gag is placed between the teeth, the index finger of the left hand is introduced into the post-nasal space, and all the growths definitely located. The tongue is depressed and the Gottstein forceps inserted back of the soft palate, grasping the tissue and tearing it away, care being exercised not to grasp the Eustachian cushions or posterior end of the nasal septum and injuring them. The forceps must be introduced several times in order to remove all the growths; frequent examinations of the vault must be made by the index finger, to see that no tissue remains; then insert the sharp curette to remove the remnants not torn away by the forceps, using no undue force.

At times the bleeding is quite profuse, necessitating a stopping of the operation for a few moments in order to mop out the blood, sometimes requiring pressure to the naso-pharynx with cotton mops to arrest hæmorrhage, after which the operation may be continued until completed. After thorough removal the bleeding usually ceases very promptly; if not, a saturated solution of tannic acid and water may be applied to the naso-pharynx by cotton mops, holding them firmly against the bleeding surfaces.

Should these milder measures fail, then firmly pack the post-nasal space with gauze, not allowing it to remain more than from twelve to twenty-four hours, because of the danger to sep-

tic involvement of the middle ear through the Eustachian tubes.

The nostrils should be gently squeezed, freeing them from the blood which they contain, finally mopping them with cotton fastened on a straight probe, which is passed through into the naso-pharynx. All of the clotted blood should be removed from the post-nasal space, lessening the danger to septic involvement.

The patient must be kept in bed until all the effects of the anæsthetic have passed off, usually from twelve to twenty-four hours. At the end of this time, if no complications have arisen, the patient may be allowed up and around the room. If there is no discharge or odor, or rise in temperature, or symptoms of ear involvement, the less done to the parts in the way of spraying, the better; should any of these symptoms be present, a mild alkaline solution sprayed through the nostrils to cleanse the parts will be sufficient.

We often hear it said among the laity, and occasionally by physicians, when attention is called to these conditions in children, "I would not have anything done; the child will grow out of it." It is true, children sometimes outgrow some of the symptoms, but at the same time they grow into others far more serious, and which handicap them through life. How often are cases seen where operation has been neglected or deferred from time to time, with the forlorn hope that nature would bring about a normal atrophy at puberty. In the meantime irreparable changes have taken place in the organs of hearing, and the normal development of the naso-pharynx has been impeded. There are some cases where the growths do atrophy after puberty, but rarely entirely, and, when they are sufficiently large to interfere with normal functions, create an irritation which produces a post-nasal catarrhal condition so chronic in its character that later treatment becomes entirely ineffectual, all of which could have been avoided by early operation.

It is also true that operation is not always required, but in a great number of cases it is an absolute necessity, and in no branch of medicine are the results more gratifying than from the early removal of these naso-pharyngeal growths.

The once listless, unobservant, undeveloped, sickly, pale, emaciated child seems to have had a new birth, awakening the dormant faculties; the expression brightens, the vacant stare rapidly disappears, the mouth breathing more gradually, phonation becomes clear and distinct, nervousness disappears, and with the return of hearing the previously dulled mental faculties rebound with such rapidity that the parents, and ofttimes the physician, are astonished at the marvellous result.

DISCUSSION.

Dr. I. G. Shallcross: I would like to call attention to the point that Dr. Weaver made. It has usually been said that these conditions were neoplasms. I was very glad to see in the Doctor's paper that he makes the proper distinction, and I should like to call attention to it. They are simple hypertrophies, and reflexes due to these post-nasal conditions are often quite marked, and there are, as a result, laryngeal cough, headache, and sometimes asthma. I remember one case in which asthma had been pronounced for years. I made an examination of the nose, and likewise the pharynx, and there was nothing wrong. It was the case of a man twenty-four years of age, who had asthma ever since he was ten years old. I was making an examination of his post-nasal space and failed. After making repeated examinations, I made an examination with my finger, and found adenoids that had already commenced growing, and adhesions had taken place between the adenoid tissue and the post-pharyngeal wall, and I suppose I broke up twenty or twenty-five adhesions with my finger, and the man has not had asthma since. I only had to remove a small portion of the tissues in that case, but before that the asthma disappeared from the breaking up of the adhesions. I do not think that I can emphasize too forcibly the early operation of these cases. Sometimes medicine does some good, and I believe that a trial of them should be made. If my local application and internal remedies produce no results in three months I give the case up as a bad job, and say the only thing to do is to operate. It is surprising to see the change which takes place in a child within twenty-four hours after an

operation; it is truly marvellous. Many times the parents will come and say: "Well, Doctor, I was surprised last night; I had to get up and see if my child was alive, she was breathing so quietly; it worried me." And these experiences we have every day.

In regard to operation, I do not think there is any danger. I have never seen much danger in any case that I have operated or seen operated. I have never seen alarming symptoms. I have seen profuse hæmorrhage at times, but it never caused any great anxiety.

Dr. E. R. Snader: I should like to ask the specialists in this line whether they consider lithiasis a cause of these adenoids? I notice that Dr. Weaver, in his paper, does not refer to that factor as a possible one. Recently I read that a New York observer had had recurring attacks of adenoids in some children under his care, and symptoms connected with lithiasis as a causative factor.

REPORT OF THE SECTION OF OBSTETRICS.

The Surgical Side of Obstetrics, by D. C. Kline, M.D.
Observations on the Use of Forceps, by Isaac Crowther, M.D.
The Difficulty of Diagnosing Puerperal Complications, by E. W. Mercer, M.D.
Care of the Woman During Pregnancy, by Margaret Hassler Schantz, M.D.
Breech Presentations, by F. R. Schmucker, M.D.
Hyperemesis During Labor, by Julia Gould Waylan, M.D.

THE SURGICAL SIDE OF OBSTETRICS.

D. C. KLINE, M.D., READING.

THE watchword everywhere at the close of the nineteenth century is progress; progress in all the arts and sciences. We progress in our manner of living, progress in our methods and manner of travel, progress in our implements of war on both land and sea, hence make war more destructive and terrible, therefore of shorter duration; we progress in the prompt administration of law and justice; progress in the practical application of theology and religion to the present-day needs—thereby endeavoring to protect our weaker and downtrodden *Cuban brothers.*

Now, why should we not make greater progress in our methods and manner of protecting our suffering wives and sisters, and this particularly after they have marched through a *nine months' travail* and entered into a battle, not with the purpose of destroying life (as in other battles), but with the hope of giving forth a human life; here we should be ready and willing to put forth our every energy, and bring into action our every faculty, thus giving them every possible attention and aid.

We have not as yet come to consider Obstetrics with that serious care which the subject deserves.

We constantly hear so much of higher and more thorough education for the medical student, with additional examining boards to stand midway between colleges and State (all of which

is proper), and yet allow a poor woman's life, as well also that of her offspring, to be jeopardized during one of the greatest ordeals of her life by the attendance of an ignorant and illiterate midwife, one who knows absolutely nothing of anatomy or physiology, a woman who entertains no conception of asepsis or antisepsis, one who has never spent a day in any institution of learning with the idea of preparing herself or receiving any instruction in the art or science of obstetrics.

This we believe to be radically wrong, and a halt should be called; no one should be allowed to practice the art of obstetrics unless he has been properly and scientifically educated and licensed for that particular branch of medicine.

We would not consider it rational to allow a class of uneducated men or women to practice surgery who had received no special training in that branch of medicine.

As previously stated, we are progressing in other avenues of life, and likewise have we advanced in the art of obstetrics; nevertheless, there is room for vast improvement; we must come to regard obstetrics as *surgical* in character.

The lying-in room should be cleaned and prepared in much the same manner as though an important surgical operation was to be performed; the bed and bedding should be clean, patient bathed, bowels emptied, genital organs scrubbed and disinfected; in brief, everything arranged and done aseptically.

We are, however, moving in the right direction. Our patients, as well as physicians, are coming to understand and appreciate the decided advantages of hospital facilities, and why not? The uterus is an exceptionally secreting organ, and we are almost certain to have lacerations or abraded surfaces—hence would it be at all irrational to deal with an obstetrical case with nigh the same strict care that we do in abdominal sections?

With a competent trained nurse and a little extra effort, the patient can, of course, receive much the same attention in a comfortable home as in the hospital; just as other surgical operations can be done in private. And yet we all prefer the hospital, believing that, as a rule, our patients are safer with the thoroughly aseptic surroundings and removed from home environments.

It is a self-evident fact that many physicians do not have hospital advantages, or even the assistance of trained nurses: here allow me to suggest that you can readily instruct an intelligent woman to be of great service to you. Select one in your community and teach her yourself to give the douche, enemas, bathe the patient, use the catheter, take and record the temperature and pulse, make her understand the difference between being "socially or æsthetically clean and surgically clean," and after a little practice you will be surprised to find what a valuable assistant she will prove to be. (This manner of training is, of course, only suggested, to render assistance where a thoroughly trained nurse cannot be secured.)

The average physician should go to an obstetrical case prepared to cope with almost any emergency that may arise; his obstetrical bag should at least contain forceps, chloroform, ergot, hypodermic syringe, brandy, verat. vir., morphia, needles, catgut, silk and wire sutures, dull curette, dressing forceps, sound, catheter, bichloride tablets, carbolic acid, boracic acid, scissors, iodoform gauze and powder, plain sterile cotton and gauze, vaseline, or, what is preferable, boiled soap, fountain syringe and rubber sheeting, unless he is aware that the family possesses the two last named articles.

Immediately after delivery the perinæum should be examined, and if there be a slight laceration, it can easily be repaired at once by any physician who is competent to deliver a woman or worthy of being called doctor; if one or two sutures will remedy the injury, it can readily be done without an anæsthetic, if repaired immediately while the parts are somewhat benumbed from excessive pressure and stretching; even slight lacerations should be remedied.

If, however, the laceration is extensive, extending well back or into the bowels, a few hours' rest would preferably be given the patient, competent assistance secured, convenient and proper accommodations made; then an anæsthetic administered and a competent operator secured.

Before repairing a lacerated perinæum we should examine the cervix to see if any lacerations exist, and remedy these first, if they be at all extensive.

Prior to these operative measures for either cervix or perinæum, however, it is good practice to use the intra-uterine douche or dull douche curette, and thus remove all clots and *débris;* this will aid contractions and lessen the amount of lochia to follow which must pass over the repaired parts and may disturb union.

In fact, if the intra-uterine douche or dull douche curette, with a suitable disinfectant, were used more frequently following labor, we would not only lessen the amount of lochia, but many times save our patients from an endometritis, causing an ugly leucorrhœal discharge, and many of the slight cervix lacerations would be repaired by nature instead of the surgeon.

DISCUSSION.

Dr. T. J. Gramm: This paper is thoroughly in line with those presented a few years ago. I recall one especially by Dr. Christine which was on the same line as portrayed here by the Doctor.

I very fully agree with him in regard to the importance of thorough education in obstetrics and in obstetric methods, and his reference to the war puts me in mind of one of Cooper's doctors who inculcated in his students that obstetrics was the most important subject for the student and one he was first to study, for the reason that it is necessary to help the child into the world before he could help anyone out of the world!

So I thoroughly believe that we ought to take care of our pregnant women and teach them as to what is to take place. I think that we ought to train them in the idea that there are certain preparations to be made for this labor, and likewise that we should make the preparations which the doctor has named, that is, have antiseptic materials ready and all of the appliances at hand which may be called for. Now, he has stated that a woman, and the room, I believe, where the patient is to be confined, should be prepared with as great care as that which is exercised prior to the performance of an abdominal section case. I have observed more than once that that was the identical expression we used to hear by one of the most prominent obstetricians in New York City. It is one that I have maintained,

and I am glad to see it emphasized again now. Now, as a matter of fact, if we examine the older methods of going unprepared, making no arrangements for the delivery of the woman, they were attended by a mortality which is far greater than the individual who is in contact with his few cases would be led to believe from his own experience. In other words, I think we should assume the position in obstetrics that is assumed now by all of the first-class governments, that is to say, to be thoroughly prepared and thoroughly armed in peace; not to have the preparations all arrayed there with great display and think it is necessary to use them, but it is necessary to have them ready, in order to be able to use them at once, intelligently and quickly, if the occasion should present.

Now, I dread to touch on the last subject to which I desire to refer. It is a tremendous subject. If it is properly discussed it will precipitate the Society into a debate which will be almost without end, and that is, the fact that the doctor, I am surprised to say, advocates the use of the vaginal douche, without sufficient or given indications. He says, as a rule, before operating these cases, to make use of the vaginal douche.

This is a tremendous subject. It is a subject, however, which is believed to have been more or less settled recently, as I hope to show in a paper that I may have the privilege of presenting. It has been shown from statistics and from examinations that the vaginal douche is not required, as a rule; and I would also like to speak against the habitual use, or even the use, of the vaginal douche without special indications, for fear that this subject might go out, either among practitioners, who would not further look at it, or among students, and become the accepted practice, as it was a few years ago. A few years ago—about ten, I think; it was probably more than that; twelve or fifteen years ago—this subject was accepted over the medical world, and we had an idea that our women required antiseptic treatment before delivery and immediately after delivery, because they were likely to infect themselves, and that is just exactly what is proven to be not so, and I would therefore like to disagree with the doctor in recommending the vaginal douche without absolute and strict indications.

Dr. D. C. Kline: I said where there was a profuse lochial discharge I would use the intra-uterine douche to prevent the discharge which is likely to follow afterwards and interfere with the operated parts.

Dr. B. F. Betts: There is one point in this paper that I want to emphasize a little, that is, the fact that the doctor does not advocate the licensing of midwives. In some of our State Societies this proposition that midwives should be licensed has been rather strongly advocated. I wish to endorse the doctor's view, so that it may be more emphasized and lead us to think a little more upon this subject before deciding in favor of licensing midwives. The doctor takes the ground that an obstetric case must be attended by a skilled physician to be satisfactorily attended—men and women thoroughly educated in the science and art of medicine—and must first have some knowledge of surgical technique. Now, if we stop short of these requirements in any way at all, we will get into great trouble. Therefore, it seems to me that upon every occasion we should let our views be known upon this subject in favor of not licensing midwives, but restricting the practice of midwifery to the medical profession. I would be so much in favor of this view as to be glad to see such laws passed as would make it incumbent upon the family in some way to secure the services of a medical practitioner upon such an occasion. The poor in our cities have such physicians. It might not be possible in country districts, of course, to have all cases reported to the authorities by a medical man, but such should be the aim and intent of the law to have these cases recorded at the Health Office by medical men, so that we may have some sort of supervision over this very important process of parturition—I mean some sort of a State supervision, that we may know of deaths occurring from improper management of such cases and from criminal procedures. If the law is intended to protect the citizens or residents of the community, certainly this important point ought to be provided for by statute.

Dr. Isaac Crowther: I am very glad Dr. Kline brought up this question of the legal standing of people practicing midwifery. As a member of the Board of Health in the city

where I live, this subject has been called to my attention, that the most ignorant, unskilled, untrained, unreliable people make a business of practicing midwifery, and the law protects them. If they simply register in cities of the third class with the Board of Health, then their certificate of birth is good, and in that way the law itself adds encouragement to this state of affairs, and I think that this Society at least ought to refer this matter to the Legislative Committee for consideration. Apparently the object of the law as it now exists is simply to provide for the registration of births; in other words, to provide for the full carrying out of the questions of vital statistics; and it brings to pass a worse state of affairs, one far more dangerous to the community, that of putting this grave, serious matter in the hands of untrained and unreliable people.

Dr. C. S. Schwenk: Do you know of any action taken in a case where a midwife attends a case of obstetrics with death resulting?

Dr. Isaac Crowther: She has no right to give a certificate, but it must be referred to the Coroner or some one better qualified than she to give a certificate.

President: Do we understand that you have a motion?

Dr. Isaac Crowther: If it be in order, I move that this be referred to the Legislative Committee for consideration, to see if they can evolve a plan by which this may be properly treated.

President: I understand your motion is that the question of midwifery practice in general be referred to the Legislative Committee for investigation. (Seconded and carried.)

Dr. T. J. Gramm: I simply rise to say that in Germany and other continental countries the midwives are licensed: but the societies, that is, governmental medical boards, state a mode of practice for midwives, and it was just with that in mind that I was speaking a moment ago in regard to the vaginal douche. Now, that subject, for example, or the use of bichloride, for example, or the use of carbolic acid is definitely regulated in regard to the practice of midwifery, so that in those countries where midwives are licensed they have a form of practice determined for them. Likewise they are not allowed

to apply the forceps; and so, in the same way, under certain other conditions which may arise in obstetrical cases, they are compelled to call in the attendance of a physician. Therefore there would be no death taking place in the hands of a midwife in countries where such laws exist. I think, with the doctor, that such a condition should be instituted in this country, if we are to have the practice of midwifery at all continued. There is not the same reason for midwives practicing obstetrics as exist in other countries, but if it is continued it ought to be under governmental supervision in some such way as in those countries to which I refer.

Dr. E. W. Mercer: The practice of midwifery is very much more common in European countries than it is here; but while that is true, midwives are very differently educated and prepared for this before they are licensed. They must take a regular course in delivery, and in Vienna there is a section—one-third of the hospital, *i. e.*, one-third of the maternity department—devoted to the education of midwives; and this is not only true there among the poorer classes, but is very generally practiced, and many physicians employ the midwives and rarely attend normal cases themselves. Of course, from their education they are enabled to recognize the abnormalities.

OBSERVATIONS ON THE USE OF FORCEPS.

ISAAC CROWTHER, M.D., CHESTER.

The worthy chairman of this section insisted upon a paper, assigned my subject, chose the title, and demanded a *practical* presentation.

Therefore, upon him rests the responsibility for these cursory remarks on the Use of Obstetric Forceps.

A Problem.—Every child-birth is a problem of engineering; the extraction of a human being from a closed, sealed cavern through a tortuous, contracted subterranean passage. The aim—the safe, speedy, successful delivery of a live child. The end—the delivery at all hazards. The exact problem—how?

Happily, it is usually accomplished by natural laws and vital forces without violence or the need of external interference, but beset by so many difficulties and dangers and delays that the engineer in charge must be ready and able to consummate the enterprise successfully, with or without the vital forces—an operation of infinitely more value than the extraction of precious ore from the womb of Mother Earth.

A problem of a new life—two lives, perhaps—or death! Of all the inventions of God-given mind, none have greater meaning, or have done more for suffering, imperiled motherhood, than obstetric forceps. They rank among man's greatest achievements.

Obstetrics is an art which, from our practical standpoint, ought to be considered a department of surgery. If it were, there could no longer be among the statutes of a great commonwealth the registration and protection of untaught, unskilled, ignorant old-women midwives, while a medical examiner's law exists for the physician and surgeon.

First.—A plea for the more intelligent and general use of forceps. Even at the risk of exciting dissent, I assert my belief that forceps ought to be more freely and frequently used by the family physician. This statement does not apply to the specialist, the operating obstetrician.

It is not an uncommon thing to meet a physician going to a labor without his forceps. But he has gotten through so many cases without them that he hopes to do so again. He would hesitate to own it, yet he really expects nature to do that for which he is called. Perhaps he doesn't own a pair of forceps! He is equipped with medicine-case, antiseptics, chloroform and ergot; but, useful as these are, his forceps are better in time of need. Think of a surgeon deliberately going to a case without his *instruments!*

Second.—*Why* forceps should be more generally used. The unaided hand is one of the best obstetric instruments, but it is not sufficient. Briefly, in a word, the forceps are better tractors, rotators, levers. Compare your hands, please, with the long, modern forceps. Put both hands together and make tractors of them.

Is there any question of the superiority of the light, long, strong, smooth and narrow, highly polished, wonderfully curved steel blades and metal grip, given the same hands and minds to use them? And the steel can be cleansed and soaked quite as easily as the hands, and is far better for boiling purposes. There is an apparent disadvantage in the lack of tactile sense, but this is more apparent than real, for the long steel blades are good conductors of sensation, and, like the angler's precious bamboo, become so sensitized that the area of prehension is greatly extended. The use of forceps does not supersede the obstetric hand; it *is* quite as essential.

Third.—Forceps-use calls for preparatory common-sense education. *a.* The physician should regard forceps with more respect. Have a larger realization of their value and utility. Take them with him to every case and have them ready for use. Not keep them at home in reserve for the greater accidents and dangers of labor, such as mal-presentations, unfavorable positions, impactions, failure, exhaustion and complete disability.

He must not regard them as a last resort but as a possible aid in any case.

Forceps are applicable when the os is dilated or dilatable, and there is a possibility of delivery through the parturient canal. They have their limitations and cannot take the place of version, Cæsarean section, etc. *b.* The education must be extended to the woman. Don't sneak your instruments into the room, lest she should see them and get scared. Don't let her think them instruments of torture. Teach her not to regard them as the lancet, the cautery, or even the dental chair. Make her feel that they are safeguards and deliverers. If occasion arise, show her how much *nicer* they are than your hands—not so thick, short and clumsy—and their use will be robbed of one of its greatest drawbacks, her mental suffering and shock. Above all, assure her that instead of injuring her child, in whom all the fond hopes and ambitions of maternity have centred for months, they will protect the child, and possibly save its life. It is not necessary to educate the patient or attendants in the art of midwifery, or to display your own great skill and learning.

Fourth.—The intelligent, skillful application of forceps need not injure nor disfigure the child. Injury is possible, of course, and care must be observed, both for the protection of the mother and the child. *a.* Care for the mother. Guide the point of the blade by the hand within the canal so that it shall properly enter the cavity of the uterus without pinching the tissues, and so that when the forceps lock they shall not include any of the maternal parts. *b.* The forceps may grasp *any* portion of the child's head. We are considering only head-first cases in this paper, but they include, according to Reynolds, 97 per cent. of all labors at the end of pregnancy.

The operator, through his fingers, must know that nothing but the head is included in applying the forceps. A unique case in point is reported in the *N. Y. Med. Journal.* The upper blade would not lock and became fastened in utero by a hard, unyielding body, so that the operator had to depend entirely on nature and take care of the imprisoned blade.

On expulsion, it was found that a hand and arm had slipped through the fenestrum of the blade.

Feel all around your blades, if possible, before locking, and making traction, so that the sharp edge may not rest on the ear or the nose, and that the tip does not press into the orbit or mouth.

Fifth.—Traction and compression must be moderate and intermittent.

Compression is the great danger to the child, and depends largely upon the degree and duration of the traction. Take your time; go slowly when using forceps, unless there is danger to life, as in convulsions, hæmorrhage or asphyxia. Do not let the patient nor attendant think you are going to pull the child right straight out.

Introduce the blades during relaxation, make sure they lock easily and accurately, and then pull little by little, and, as a rule, during the pains. An interesting case illustrates the exception to this rule. Multipara; thin and scrawny; head presenting but refusing to engage; os dilated; pains vigorous; labor protracted and woman worried. Examination revealed contraction and closure of the os at each pain, rendering expulsion impos-

sible. I gave gels., a royal remedy for obstinate os, and introduced my hand, hoping to overcome the contraction.

This failing, I tried my forceps; introduced them during relaxation, waited through the contractions, and succeeded in bringing the head down between pains, and safely delivered a well-formed child: no laceration.

Don't pull hard, it isn't always necessary. Pull gently, lightly. Don't grip the handles as the novice does the handle-bars when learning to ride the bicycle. Rather watch the direction of the natural descent and rotation, as the driver of an intelligent, sweet-mouthed horse feels the bit when driving in the dark. Don't pull long or continuously; wait for indications from within how and when to pull.

Even unlock the blades after a traction to correct their position. If progress is slow or the way long, it may be necessary to remove them several times. This may prevent abrasions and lacerations, and enable you to get the proper direction. Another precaution against compression and abrasion is to catch the handles near the blades, moving them carefully from side to side, rather than pulling straight away.

Sixth.—The easy, accurate locking of the blades is the safest and final test of the forceps case.

Press the tissues away as you introduce the forceps, letting the blades glide into place largely by their own weight. They will take the course where there is the most room, and you must satisfy yourself that they seize only the head. If they lock well, you may be sure you are right and go ahead. I have never failed to deliver when my forceps locked right. But how shall we make them lock right? Best, I think, by

Seventh.—The common-sense rule of introducing them in the direction of the least resistance, in other words, in the *sides* of the *pelvis*, taking no anxious thought of the part of the head they grasp.

The blades are curved, not only to conform to the convexity of the head, but also to fit the concavity of the maternal walls. I always apply forceps with reference to the sides of the pelvis; it is easier, and, when the pinch comes, there will be the least hurt. There may be exceptions to this rule, but my experience has not demonstrated them.

Eighth.—The question of the woman's position is not so exacting. I think the *dorsal* position best—hips well over but resting firmly on the edge of the bed. Yet, some claim that the lateral—woman on her side—is better. I do not think it is as easy to introduce the instruments when the patient is on her side, but it does enable the operator to follow the axes of the pelvis, to protect the perinæum, and to control the degree of traction. Two assistants are needed if the woman lies on her back. Often, in suburban practice, the presence of too many old women and the husband is an annoyance.

All the advantages may be secured by the dorsal position for *applying* the forceps, and the lateral for delivery. This procedure, or axis traction rods, might have saved my energy and dignity in two cases, some time since.

One, primipara, æt. about 40; vertex, labor difficult and delayed by complete ossification of the child's head and unyielding soft parts of the mother. Found no difficulty with the forceps until the perinæum was reached, when I had to stand up on the bed with both feet to liberate the head. Absence of laceration was a great surprise. She was a big-boned, masculine woman, who had lived in several places during gestation, in all of which time she had an inordinate desire for potatoes, which she ate at nearly every meal. Question, the relation of potatoes and ossification? Second, a big, flabby multipara; weak pains, large head under arch of pubes. Had to bring her hips away over low bed-rail, and lie flat on my back on the floor and pull for my life under the overhanging mass.

Ninth.—Axis traction rods are the completement of forceps, the martingale of the harness, and make forceps safe and sure. They reduce the dangers of laceration and compression by enabling the force to be applied in the right direction. They are simple, easy and inexpensive, and ought to be a part of every equipment. With them the short forceps are not needed, and high applications are more easily and safely made. Incidentally, I think I find the greatest need of forceps in high cases.

Tenth.—*When* should forceps be used? It is beyond the scope of this paper to lay down any hard, fast rule, or to enumerate the many forms of dystocia calling for forceps. One's

judgment, skill and experience must determine when. In general terms, forceps are to be thought of in all difficult cases; to save life, to relieve excessive suffering, and to aid failing or insufficient natural forces. Forceps need not be restricted to dystocia or the accidents of labor only. Whenever nature needs assistance from without, and there is probability of delivery through the parturient canal, they may prove helpful. The *abuse* of forceps cannot be too strongly condemned. The physician has no right to apply forceps merely to keep office engagements or social appointments. Even needed sleep must be sacrificed rather than interfere with labor, except for reasons concerning the labor itself. Meddlesome midwifery is almost as bad as negligence or incompetency. Let the watchword for forceps be, *Difficulty, distress and danger.* Neither is it *absolutely necessary* to give an anæsthetic, although it is generally advisable to do so.

I sometimes think, other things being equal, that if there is no *competent* assistant to give the anæsthetic, it is better to apply the forceps without it; so *do not* neglect them for the sake of the ether. I, somehow, *feel* safer when the patient is conscious. But I think, forceps or no forceps, that some of us neglect the anæsthetic.

Years ago, within the walls of this Institution, we learned to dread the ether bottle, the forceps and post-partum hæmorrhage. My experience with forceps has not upheld my fear of laceration and hæmorrhage. Incidentally, it isn't necessary to consider forceps and consultation inseparable.

Eleventh.—The question of forceps and laceration of the perinæum is interesting, but we can merely call it up for discussion. I do not believe that the skillful, elective use of forceps is productive of lacerations. On the contrary, I *do* believe that forceps may protect and save perinei. True, forceps cases often seem to cause laceration, but I rather think it is an accompaniment of the *difficult* labor demanding the forceps. Moreover, to guard against laceration, I make it a rule to remove the blades before they are caught in the muscles of the outlet.

Twelfth.—Associated with the use of forceps is the necessary

emphasis upon surgical cleanliness, absolute asepsis and antisepsis. I always carry mercuric-iodide soap, bichloride of mercury tablets and formaldehyde.

These I use on *myself* and instruments—only washing the external genitals, perinæum and anus with antiseptic soap if contaminated by fæces. I have a solution of formaldehyde for the instruments, and another of mercury, in which I dip my hands repeatedly. I almost never douche the patient before labor, and rarely afterwards, relying upon the self-cleansing, self-protecting bacillæ vaginæ for protection from without, making sure that *I* introduce no avoidable germ.

Finally, the physician who indulges in abdominal section, autopsies, and the pleasures of evacuating abscesses, or who delights in diphtheria, scarlet fever and plain measles, or in other septic and infectious diversions, ought to think well before going immediately to the lying-in chamber.

THE DIFFICULTY OF DIAGNOSING PUERPERAL COMPLICATIONS.

EDWARD W. MERCER, M.D., PHILADELPHIA.

Without the knowledge or consent of the Chairman of the Bureau of Obstetrics, I have taken the liberty of changing the subject of the paper which I present for your consideration today. I was led to do this by the fact that at his solicitation I was compelled very early to furnish a title, and before it was time to think of the preparation of the paper there came under my observation several cases which directed my attention to a phase of the subject which I believe is of the greatest importance, both to the obstetrician and general practitioner: The difficulties we encounter in differentiating and diagnosing the complications of the puerperium.

Woman during the puerperal state is subject to the same diseases as woman in her ordinary conditions of life. During pregnancy, by reason of her exaggerated physiological condi-

tions, she approaches very closely the border-line of a pathological state, and after the exertions of labor there follows a more or less profound depression and shock to the system which results in diminishing her powers to resist extraneous disease-producing influences, and rendering her still more liable to attack.

Again, certain latent diseased conditions may crop out into acute exacerbations during this period, under the stimulus of the general activity present. Lastly, and perhaps most important, those morbid processes which may be said to especially menace the parturient woman, notably sepsis in its various manifestations, should always be uppermost in our minds when considering the possible complications of the puerperium. It is the coexistence, or the possible coexistence, of this latter factor with other diseases which many times makes it difficult to accurately differentiate in these cases. As an illustration of some of these difficulties, I will briefly relate four cases which were recently treated in the Hahnemann Hospital.

Case I.—Miss G., aged 29, a supposed case of self-induced criminal abortion. The patient was first seen on March 6, 1899. Previously menstruating regularly, she had gone a week or ten days over the last period. She admitted the possibility of pregnancy and the taking of an emmenagogue in the form of pills of some sort, after which a flow came on containing clots, but nothing formed, although this was not examined for. From this time she dated her illness. When seen, she complained of headache and stiffness of the muscles of the neck; the breasts were sensitive to touch: there was also pain in the abdomen and iliac fossæ extending down to vagina and vulva. On examination she was found to have an offensive bloody vaginal discharge; uterus but slightly enlarged; the abdomen somewhat distended and sensitive. The temperature was in the P. M. 103.4°; the cervix was soft, but there was little dilatation.

I advised curettement, and she was removed to the hospital and prepared for operation the following day. The uterus was curetted, but nothing found resembling membrane more than a few particles, such as we might find in an endometritis. No microscopical examination of this was made.

After operation the discharges lost their offensive character, and there was also a temporary decline in the temperature, never below 100°, however, and no subsidence of the other symptoms. After two or three days the temperature became higher, and this, with the general appearance of the patient, her persistent headache, a dry skin, much more so than we usually find in septic conditions, and a suspicion of spots on the abdomen, led me to have her blood examined, with the result of its revealing the presence of the typhoid bacillus. She was transferred to the medical ward, where she passed through a typical typhoid, terminating in recovery.

Here was a case, apparently one of the kind we so frequently meet—a history clearly pointing to an abortion; and yet, as we look back, it appears very doubtful if the patient were pregnant at all. Her amenorrhœa may be accounted for by the oncoming fever, or it may be possible it was present at the time. The putrid character of the flow may have been due to infection from an effort to mechanically interrupt a supposed pregnancy, or the high temperature, with the blood changes resulting from the typhoid, might induce such changes. Let me say, in passing, whatever may be said of the diagnosis in this case, the treatment I believe was good, for we at once eliminated a very important factor, in arriving at a diagnosis, without any detriment to the patient.

Case II.—Mrs. M., aged 32, was admitted to the hospital April 15, 1899. On admission she had a temperature of 105°, pulse 120, and was in such a weak, prostrated condition that little history of her illness could be obtained from her. From her physician, however, it was subsequently learned that on the previous day she had given birth to a six-months' fœtus: the placenta had not been expelled; also that she was an alcoholic, and had previously suffered from a nephritis.

An examination showed the uterus to be large, os patulous, bleeding moderate, but evidences of the presence of the secundines within the uterus. Although in bad condition, she was prepared, and under chloroform narcosis the placenta was removed the same afternoon.

An examination of the urine gave albumin in considerable

quantity and granular casts. After cleaning out the uterus the patient's condition did not improve, but became gradually worse, she developing an œdema of the lungs, and in forty hours after admission died.

An autopsy showed the presence of acute parenchymatous nephritis, and also ulceration of Peyer's patches.

In this case, which was doubly complicated, we anticipated the nephritis, both from her history and the urinalysis sheet, but the typhoid was entirely unexpected, the patient dying before an examination of the blood could be made.

Case III.—Mrs. B., I saw with the visiting physician on the medical side of the hospital. She was admitted August 22, 1899, with temperature of 103.2°, pulse 130, in a semi-comatose condition. It was impossible to get a history from her, but from her husband, later, it was learned she had been complaining since July 10th, of what was not stated. She was believed to be three months pregnant. About August 1st she had taken some emmenagogue, and also used vaginal tampons, for the purpose of interrupting pregnancy, and after that time she had had a bloody discharge from the vagina. Whether anything more than this had passed was not known.

An examination showed the uterus to be large, os somewhat patulous, a bloody discharge without offensiveness. Despite the fact that this patient was considered to be the subject of an incomplete abortion, it was not believed her symptoms were accounted for by this, even if she were septic, which seemed improbable, while, on account of her irrationality, little dependence could be put in her statements; she complained of not seeing well, and her staring appearance seemed to indicate as much. There was a peculiar form of delirium; if left alone an instant she would get out of bed, and despite her condition walk about the room, totally differing from the patient with the prostration of sepsis.

Locally she was given antiseptic douches. A specimen of blood showed negative results from Widal's test, but the urinalysis revealed a nephritis. The condition present was diagnosed as uræmia. On the 25th, three days after admission, the patient died. Autopsy showed the cause of death:

interstitial nephritis. The uterus contained a small piece of placental tissue, but no evidence of septic change in it.

Case IV.—Mrs. S.; aged 25; admitted to the hospital August 23, 1899, with a temperature of 103.8°, and the history of having four days previously been delivered of a seven-months' fœtus. The patient was rational and complained of nothing especially at that time; upon carefully taking her history, it was found her illness antedated parturition. A week or ten days prior she was taken sick with headache, backache, pains all over body, felt tired and weak, had fainting spells, was feverish and hot.

On the 19th she was taken with labor pains, and during the day delivered of a premature child. On examination the abdomen was found very much distended, uterus almost to the umbilicus and to left side, and there was present a very fetid lochia; the cervix was patulous, but there was no sensitiveness about the uterus or pelvis nor pain in the abdomen. While this had very much the appearance of being a case of sepsis, pure and simple, typhoid was suspected from the fact that her illness occurred a number of days before delivery, and also from the symptoms complained of at that time, and which might have been the cause of prematurity. She was given antiseptic douches, vaginal and intra-uterine, with improvement in the character of the lochia, and involution of the uterus gradually followed, but there was very little effect on her temperature. A blood examination gave Widal's reaction, showing typhoid fever; the patient was turned over to the medical side, and ran a typical course, and I believe now is convalescent. These cases furnish examples of some of the difficulties which we may encounter.

Most diseased conditions, but especially those accompanied by a rise of temperature occurring during the puerperium, will cause considerable difficulty of diagnosis, and all deviations from the normal merit a most careful examination of our patients.

Before so much was known of sepsis these deviations were very apt to be attributed to "catching cold," getting up too soon, too much company, undue excitement, indiscretions of

diet, etc., very doubtful factors in the causation of complications.

Even to-day we will find patients, members of the family, or nurses, ready to offer from among these the probable cause for certain abnormal symptoms. Do not let them make a diagnosis for us, but bear in mind that a tangible cause must be found, and if not found in conditions disassociated with the parturient process, we must consider them due to some of the various phases of infection to which these patients are liable. Perhaps a better way to put it would be to consider and treat all such cases as sepsis until it can be proven that they are not.

Who has not seen profoundly septic puerperal cases complacently treated as malaria, etc. Such errors are inexcusable in this age when we possess the means of differentiating. Let us, then, look with suspicion upon all complications occurring during the puerperium, determine, if possible, their source, and even should they be not septic in character, if febrile, increase our precautions against invasion, as this very condition renders the patient more vulnerable.

CARE OF WOMEN DURING PREGNANCY.

MARGARET HASSLER SCHANTZ, M.D., READING.

We are ready to admit that pregnancy is a natural or physiological event in a physiological subject, but the fact that few mothers live under healthy conditions makes it, in a large per cent. of cases, more or less of a pathological event; but even the plea of a physiological event is no reason why there should not be special attention and supervision, for the delicate machinery of maternity is easily disturbed, and such disturbance cannot be with impunity.

It is not a law that woman, any more than the lower animals, should bring forth in pain, except that she violates the law of her being. Then it is her physician's duty to know the laws of health and direct her during one of the most important periods

of her life. It is the *ante-natal*, and not the *post-natal*, that makes man a human being, and not a brute.

Pyschological laws are as sure as physical laws; the action of the former is quicker and more lasting than the latter. It is through the father that life comes, and the mother furnishes the body and very many mental peculiarities. Then inherited tendencies from both parents will be given to the child, just in the degree that parents yield to or restrain these tendencies in themselves.

Two essential things are to be accomplished in the management of pregnancy:

1. The maintenance of mother and child, rendering labor easy.
2. Improvement of the race.

The results in the first can be assured to a great degree by two agents that we have at hand:

1. Hygienic agents.
2. Medicinal agents.

The second, by controlling the passions and thoughts during pregnancy; for, if you believe that strong impressions upon the mother's mind may communicate themselves to the fœtus, producing marks, deformities, etc., how much more should you believe that irritability, anger, grief, hatred, or any perversion of disposition may be impressed upon the child's moral and mental nature, rendering it weakly or nervous, passionate, or in some way a reproduction of the mother's evil feelings.

We contend it is not enough that the general laws of hygiene as to physical health be enforced during gestation, but that special attention be given to sleep, fresh air, exercise, dress, diet.

As to sleep, pregnant women require more; and it should not be one of exhaustion, inertia, but regular hours of quiet, restful sleep. Have the woman sleep alone, so as to give room for freedom of movement and chance to lie in any position.

Exercise should not be violent or carried to excessive fatigue, or to exhaustion.

Dress, which is important at all times to health, is a vital one now. Many ills and discomforts of gestation are due to uncomfortable garments, which, by compression, interfere with the

growth of the child. The dress should be suitable to the season, and should not constrict the body of the wearer in any part, particularly about the waist; the Jenness-Miller patterns for maternity are comfortable, and look well.

More than ordinary care of the skin, by the way of bathing, should be taken. Sitz baths are restful and healthful. Vigor and tone is given to the debilitated and nervous mother by massaging the hips and abdomen with cocoanut or olive oil.

In diet we find the voracious appetite should be restrained and the feeble one encouraged. The diet should be generous, wholesome, in meats, vegetables and fruits, and easy of digestion.

So much for hygiene in a general way, and right here is where is one of the mistakes we make in the management of pregnancy; we do not specialize, for it is from special means that our results are obtained. In regard to baths for the expectant mother, the question should be, What particular baths should she have: shall it be sponge, sitz, or oil? How often, and when shall they be taken? So it is with the diet. What is good for the healthy woman with surplus of nerve force will not do for the pale-faced, cultured, delicate woman of neuralgic or rheumatic diathesis. You cannot apply the same hygienic laws and get a good result.

The popular books, "Tokology," "Maternity Guide" and "Mother and Babe" have done much to better maternity. On the other hand, there is no doubt that long, tedious labors have followed in women weakened by excessive fruit diet and the misuse of calisthenics. The harm has not come from the teaching, but in the application. Pregnancy should be managed by the physician, and the supervision should begin in the early months. Are we not answerable for the neglect of those early months? Are we always ready with sympathetic help and assistance when the mother comes to us with an apology for asking if anything need to be done, so long she is not sick or in pain? Are we not too often tired, and even ignorant, when asked about health instead of disease?—acting as if it were not worthy of our attention to specialize the dress, exercise or diet for the expectant mother in the early weeks of pregnancy; but, if a

case for surgical or medical means, applying forceps or repairing perinæums, then all is animation and activity; all listlessness and weariness are gone.

To homœopathy belongs the palm for first introducing therapeutics into the management of pregnancy as a prophylactic treatment of difficult painful labor. Not only have we modified the pain of parturition, but with the use of hygienic agents have freed the utero-gestation period from discomforts, and have produced healthy, beautiful children. Abortions, puerperal fever and eclampsia have been prevented, indigestion, constipation, morning sickness, sleeplessness, disorders of locomotion, general debility, impaired nutrition and albuminuria all have been relieved and cured by such management. So, as obstetricians having found what we can accomplish by hygienic and medical agents, let us remember that complete success depends upon attention to minutiæ and details, for it is "trifles that make perfection."

BREECH PRESENTATIONS.

F. R. SCHMUCKER, M.D., READING.

In the common acceptation of the term, "breech presentations" include those of both knee and footling, but in this brief paper I shall confine myself exclusively to breech presentations proper, as illustrated by the following case:

On the morning of June 2, 1899, I was called to attend Mrs. P.—a *primipara*—who had been in labor for several hours. The patient was a woman of fine physique, symmetrical in development throughout, and I hoped to have an easy job of it. Upon my first examination it became apparent at once that there was trouble *ahead*, there being no *head* presenting—in fact, no presenting part within reach. After nearly thirty years of practice, I dread these cases about as much as ever, and indeed more so than in my early practice, when as yet I viewed mountain heights from a distance, and had but little conception of the difficulties awaiting me in the effort to scale them.

My patient continued to have frequent and intensely severe pains, and very soon I was able to distinctly diagnose a breech. Late in the afternoon the presenting part had come into the lower pelvis, and there, for several hours, the child's progress seemed to have been arrested, notwithstanding the most agonizing expulsive pains, frequently repeated. I applied the *vis a tergo* by supra-pubic pressure, with apparently no effect whatever. The membranes had been ruptured several hours before. Beyond the pressure from above, I followed the most approved practice by non-interference with the natural, and, so far as I could ascertain, normal mechanism of the labor. My better judgment still counselled delay, but both husband and wife became clamorous for relief. I then fully appreciated the force of the remark of a distinguished obstetrician (Reynolds) when he says, "Nothing more thoroughly tests the skill and judgment of the obstetrician than his management of a breech presentation."

I asked for consultation, and my friend, Dr. Harner, was called. We endeavored to persuade husband and wife that the safer course was to give the forces of nature a more prolonged chance, but immediate delivery was insisted upon, and we yielded, with the express understanding that we assumed no responsibility as to the life of the child. Chloroform was administered, and the child, weighing about ten pounds, was dead when delivered. Life did not absolutely become extinct until operative delivery was resorted to, although the pulsations of the cord had at times become exceedingly feeble for an hour previous.

As the breech descended into the lower pelvis the right hip of the child rested against the pubic bone, and as the body was delivered the face rotated into the hollow of the sacrum; and, although realizing the unfortunate effect of traction in disturbing the relative position of the diameters, I could see no escape from resorting to it in order to accomplish delivery.

I endeavored to keep the head flexed by hooking my finger in the child's mouth and delivered as rapidly as possible, with the result, however, of a dead child.

The frequency of breech presentations at term is, according

to Reynolds, 1 in 60 cases, while Churchill puts it at 1 in 52, Dr. Penrose 1 in 50, and Ramsbotham at 1 in 38.8. It has been my lot to have 3 cases within the past six months—one a twin, dead *in utero*, another a twin born alive, and the case above recited.

The cause of pelvic presentations is not definitely known, but as experience proves that the same abnormality is likely to be repeated in the same patient, it is reasonable to infer that it is many times due to some peculiarity in the pelvis of the mother.

The mortality in infants presenting with the breech is very great—statistics showing a fatality of one out of every three, so that one author remarks that a correct knowledge and treatment of these cases is more important to the practitioner than almost any other subject in obstetrics, save, perhaps, that of hæmorrhage.

In the brief space to which this paper is necessarily confined, we will pass over all that would profitably occupy our time in diagnosis and mechanism, and come at once to that all important subject of the treatment of breech presentations.

Sitting at the bedside of our suffering patient, we may well tremble under the great weight of responsibility before us. Upon our sound judgment and intelligent management depend the safety of the mother and the life of the child.

Reynolds, in common with all authors to whose writings I have had access, advises inactivity on the part of the obstetrician so long as the natural powers appear to be effectual. Traction disarranges the normal relations of the parts, almost invariably causing extension of the legs, the arms and the head, thus seriously increasing the difficulties of delivery.

It is not proposed in this paper to give an exhaustive consideration of all the minute details of treatment in all possible emergencies and complications, but I shall only refer briefly to the following points:

1. As to the position of the patient: The lithotomy position, as near as possible, is the most desirable.

2. Never rupture the bag of waters, as it is an invaluable aid in dilatation.

3. Carefully protect the cord.

4. Have assistant aid by supra-pubic pressure, and at the same time urge patient to strain.

5. When the head has reached the floor of the pelvis, rotate the occiput under the pubes, with face in hollow of sacrum. Contrary to most, if not all, authorities, Cazeaux says the head must reach the floor of the pelvis first before rotation is accomplished, and this seems to me to be the correct view.

6. Maintain flexion of the head, if possible, by making traction with a finger in the child's mouth, or by pressure upon the occiput, or by any other means that may suggest themselves to the accoucheur.

7. As to forceps: I have never found them of any use whatever in delivering the after-coming head. If the child were still living, it would certainly die in the time required to apply them. If the child is dead, they may or may not be used, according to the necessities of the case, as it is of no importance by what process the head becomes disengaged.

DISCUSSION.

Dr. J. N. Mitchell: I never feel that it is proper to discuss the individual experiences of any man in any special case, and therefore I will not discuss the particular case under consideration. Each case as it appears to the obstetrician must be managed at the time according to the peculiar circumstances that control it. But there are one or two thoughts presented in this paper which, to my mind, should be emphasized; perhaps my opinion may differ from that of the author. The axiom laid down by Reynolds that every case of obstetrics should, as far as possible, be left to nature, is undoubtedly correct; but the other part of the proposition, where it speaks of seeing that the bag of waters does not break, or is not broken prematurely, is a matter that is left out of the case. So soon as the bag of waters breaks in breech presentation, the breech not filling up the cervix completely, there is a strong possibility of continued drawing away of all the waters in the uterus, and as soon as that happens, the uterus closes around the different portions of the child, and the difficulties commence. So, if the bag of waters breaks, care should be taken to tampon

the uterus, and if there should be continued escape of water, so that there would seem to have been a great deal of water escape from the uterus, it is the duty of the obstetrician to deliver immediately. Now, the most frequent difficulty I have encountered in breech presentation is the fact that the legs are unduly taut, so that a wedge is formed, and there is difficulty on the part of the uterus to overcome that wedge-like shape, and the operation consists, in the first place, of bringing down one leg. The danger met with in this operation is the extension of the head, and possibly that is the main and great thing; but that does not compare with the danger of the contraction of the uterine muscles around the child after the bag of waters has broken. In a considerably large experience in breech presentations I have not been able to find anything like the mortality in these presentations that Dr. Schmucker refers to, and I am inclined to think, therefore, that the mortality is from neglect of the early delivery or the prevention of the escape of the waters. So I should say, in all cases where the bag of waters has broken, and where it is draining away and the forces of nature cannot complete delivery, the proper methods would be to effect delivery as soon as possible.

Dr. E. W. Mercer: I believe the mortality is due largely to the fact that we have breech presentations occurring more frequently in still-born children than in cases where the death occurs prior to the onset of labor. I agree with Dr. Mitchell that I have not noticed any such mortality as given, and I can say, in those cases, that you should not have such a mortality. Another thing is the application of forceps on the head. I do not think we can say that they are not useful. I believe they undoubtedly are, and that it is possible, if we have them at hand in cases of difficulty, by the rapid application of forceps lives may be saved. It has been my fortune, up until a few years ago, not to have had to apply the forceps to the after-coming head, and a very short time after that I was called to deliver a breech case. It was impossible for me to deliver without the forceps, but by applying the forceps delivery was accomplished. If we have a difficult case, and there is pelvic contraction, every one knows, if it is an operative case and the

arm becomes extended, we have great difficulty in bringing it down, and what a tax it is on the muscles of the arm and hand; you are not able, then, to deliver as in the after-coming head. The application of the forceps and the hold that you have on the handles are a great boon. You are much more able to apply the forceps than by attempting to deliver by the natural process. So that in every case we should be prepared —in every breech case, in every case of version—with our forceps, ready to apply in the great majority of cases.

HYPEREMESIS DURING LABOR.

JULIA GOULD WAYLAN, M.D., PHILADELPHIA.

Considerable reference is made in the various text-books to the "vomiting of pregnancy," but almost nothing, as far as I have discovered, is written upon the subject of "vomiting during labor." The only allusion to it I have seen speaks of it as "rarely" seen—of course I refer to *excessive vomiting.* We have all, doubtless, seen patients vomit once or twice during the course of their labor with no apparent discomfort, except for the moment or moments, but the case I propose to cite was one of the "rare ones."

Mrs. G., æt. 24, married about five years, having been delivered of two living children and one three months' abortion, came to my office January 19, 1898, in a deplorable condition—not only pregnant three months for the fourth time, but feeling as though it were an utter impossibility for her to endure pregnancy under the existing conditions, which were much pain in the ovarian regions, especially the left, intense weakness in the uterine region, too weak to lift or in any way care for the children already at hand, even too weak to walk a few blocks from the car to my office unassisted. In her own words, she preferred death rather than a continuance of this weakened and painful state—not complaining so much because she was pregnant, or of symptoms usually accompanying the early months

of pregnancy, but of the symptoms referred to above, and from these she had suffered greatly since the birth of her last child.

This seemed not altogether a pleasing or promising case, but with hope and homœopathy at hand I accepted the case, determining to make an effort to relieve the patient if possible, and hoping for a favorable outcome.

Under treatment there was a gradual but decided improvement, and the outlook was quite favorable. In fact, June 5th, my record says, "patient feeling very well." When we remember how miserable the patient had been less than five months prior to this date, and that at this date, although still pregnant, cheerfully and brightly reporting herself as "feeling very well"—in view of this, it seemed reasonable to expect a normal labor.

Less than a week prior to the advent of the child the patient met with a shock in the very sudden death of her sister. She insisted upon attending the funeral against my advice. (I simply mention this as a possible cause for what followed.)

I was called to the patient July 23d, a week earlier than was calculated upon. Upon reaching the house between twelve and one, midnight, I found the patient very quiet, though assuring me she had been in labor for three hours or more. The os was dilated sufficiently to admit one finger, and the pains, which the patient bore with almost no outward demonstration, seemed short and ineffectual. She complained mostly of intense nausea, and of having vomited prior to my arrival. I very soon had an opportunity to know that this symptom had not been overstated. The retching and vomiting were most violent. About 3.30 A.M., or even a little later, during an attack of vomiting, the patient discharged a large amount of blood from the vagina, the patient supposing it to be the rupture of the membranes, until examination proved it to be a hæmorrhage.

Dilatation at this time was barely the size of a quarter of a dollar. I pushed the remedy I was using, ipecac., which seemed indicated, covering both the nausea and hæmorrhage, and in addition gave her a hot douche, hoping to gain time for continued dilatation, when I could put on instruments.

The hæmorrhage abated, resolving itself into slight oozing,

which did not seem to weaken the patient perceptibly. I kept a very close watch upon the pulse during the remaining hours of labor. Vomiting continued at perhaps half-hour intervals. As soon as it seemed possible for me to think of putting on instruments, I sent for an assistant to anæsthetize the patient and to assist me in case of another and even more severe hæmorhage.

The delivery was accomplished without the slightest difficulty; but, unfortunately, the result was a dead baby. The placenta came without any trouble. The uterus contracted fairly well, and the patient recovered nicely from the anæsthetic, but naturally was very much exhausted from pain, vomiting and loss of blood.

There is no doubt but that the placenta became partially or wholly detached during the attack of vomiting alluded to, causing the hæmorrhage, and consequently a lifeless child.

This case surely followed the only text I find upon the subject, viz.: "Should excessive vomiting in labor occur, its injurious effect is shown by weakened uterine contractions and by early exhaustion of the patient."

In this case, considering the poor condition of the patient, to start with, the exhaustion was not so marked as the weakened uterine contractions, as sometimes for an hour there seemed no progress in the dilatation, and the pains never became expulsive.

The patient had vomited in previous labors, but less frequently, and with very little, if any, retching.

The cause was doubtless an extraordinary sympathetic excitement of the nerves of the stomach in this very nervous and feeble woman.

The patient sat up in two weeks, and in three weeks walked about her room. She felt discouraged because she did not feel strong in the uterine and ovarian regions, and conceived the idea, with the aid of the nurse, that her ovaries were affected, and perhaps she would need an operation. After a careful examination, I assured her I could discover nothing of a serious character, but would have a consultation later if she so desired.

Before I saw the patient again, and without my knowledge, the husband called in an old-school physician, one who had formerly been the family physician, and who had delivered Mrs. G. of her last child. Naturally he had a grievance. He called two of his brothers in consultation. They, from the nurse's description of the case, decided that I was entirely responsible for the present condition of the patient, which they diagnosed as "Neuralgia of the ovaries;" that I should have delivered the patient immediately upon the appearance of the hæmorrhage, and that if I could not have delivered the fœtus entire I should have taken it away "piece by piece."

The nurse reported the above to me as the decision of the physicians, after securing what information they could from her. Of course she had not examined the case, and the physician did not see the case until a month after delivery.

I had examined and delivered the patient, and as far as I understand the case now, I should be disposed to follow the same plan in a similar case, except that I would deliver somewhat earlier, as I should have done then, could I have secured my assistant earlier.

Had the hæmorrhage persisted when it first appeared, there would have been no doubt as to the necessity of immediate action. I might then have been disposed to have followed the wild idea of the physicians named and given to mother earth the fragments of the child instead of a perfect one, and, as I believe, have further endangered the life of the mother.

The absurdity of the criticism of the family physician comes in here. He left this patient in very much the same condition as he found her. Now, when he was *accoucheur*, should he have hastened delivery—dismembered the fœtus—or wherein did he err? To be more generous to him, I am disposed to think the patient was an unfortunate one, and was exhausted from almost continuous pregnancy—three full-term children and one miscarriage in five years of married life.

I was led to report this case because, in looking up the subject, I could find so little about it that I concluded it must be an unusual difficulty.

DISCUSSION.

Dr. W. G. Steele: As an orificialist, I would like to call attention to one little point in the vomiting of pregnancy. I know at times we are at our wits' end to know what to do. I offer the suggestion of dilatation of the external os. I know of a half dozen cases where everything failed, where good prescribing—homœopatic and allopathic—failed; I know these cases were all rendered easy and comfortable, and pregnancy went on uninterruptedly. If you do not dilate the internal os, you will not interfere with pregnancy. But in these desperate cases one is justified in bringing on abortion.

Dr. Julia G. Waylan: There was extreme vomiting during labor rather than during pregnancy. There seemed to be no nausea during pregnancy, but during labor the vomiting was simply terrific; I never saw anything like it before.

Dr. Isaac Crowther; Some years ago I had an unusual experience with a woman who had five miscarriages. There seemed to be no trouble during the period of gestation, up to the time of miscarriage. Miscarriage took place apparently by an opening up of all the parts within, and was attended by constant nausea. My first call to the case was to find a dead child delivered by the midwife, and the woman bleeding to death, with this constant, increasing nausea. If there was anything in the stomach it was continued. Ipecac. controlled all these symptoms. She was eventually delivered of a live child.

REPORT OF THE SECTION OF MATERIA MEDICA.

Cuprum, by C. S. Schwenk, M.D.
A Comparison of Natrum Mur., Pulsatilla and Sepia, by Mary A. Cook, M.D.
Serum Therapy and Nosodes, by Edward Cranch, M.D.
A Comparison of Cyclamen and Pulsatilla, by Augustus Korndœrfer, Sr., M.D.
The Value of Aconite in So-called Heart Failure, by C. S. Middleton, M.D.
The Need of a Standard Pharmacopœia, by C. Mohr, M.D.
Mental Characteristics Tabulated for Study, by W. A. Seibert, M.D.
Hints on Studying the Materia Medica, by G. W. Smith, M.D.
Strophanthus, by R. T. White, M.D.

CUPRUM.

C. S. SCHWENK, M.D., PHILADELPHIA.

CUPRUM is a remedy with which we are all very well acquainted; therefore, its selection as a subject for a paper had in it the object of illustrating how briefly a remedy might be described for all general working purposes.

Cuprum has symptoms of a violent nature, their intensity suggesting an irritant of tissues, a poison.

Its irritating, inflammatory and constricting influence is manifest throughout the drug.

Blue face and lips; blueness of the skin; intense coldness of the surface; cramps of muscles; muscles of thighs and calves drawn up in knots; flexors are markedly involved; thumbs drawn across the palms.

Distress in the epigastrium associated with the most intense dyspnœa; great anxiety; frothing at the mouth; thirst, or rather a desire for water, because it relieves the vomiting or cough, if either of these symptoms happens to be present.

Great sensitiveness to touch. Diseases caused by vexation, fright, or suppressed eruptions. Is it necessary to have more than this? In the foregoing we have the genius of the remedy, and that is sure to be present in whatever condition, complaint,

disease, functional or organic, in which cuprum is the remedy, and it is a very easy matter to prove this by quoting from different authors recommending cuprum for different disorders. Farrington says: "Cuprum not only acts upon the bowels, inflaming them, but it acts upon the nerves, causing constriction of fibre, particularly of the involuntary muscular fibres, as in the blood-vessels, and with this we have direct irritation producing inflammation. Now, to clearly understand the character of cuprum, you must remember the other side to this picture. This condition is soon followed by collapse, with great prostration, from which it is exceedingly difficult for the patient to rally. Thus we have as a remote symptom of cuprum, and one, too, which has been greatly neglected, lack of reaction."

Allen, in his clinical description of cuprum in fever, writes: "Intermittent fever, with icy coldness of the whole body; predominating cramps in limbs; blue surface; collapse; suppression of urine."

Scarlatina, by Lilienthal: "Convulsions before the eruption breaks out, or when the eruption suddenly disappears, with tendency to metastasis to brain; quick, small, irregular pulse; low temperature; sopor; rolling of eyes; facial distortion, and also of all flexor muscles; great restlessness; throwing the body about; spasmodic action of chest; vomiting; cold face, blue lips, coldness all over; aggravation by contact."

Malcolm and Moss, in their "Regional and Comparative Materia Medica," speak of cuprum as follows:

"Cramps in limbs; weariness of limbs; contraction of joints; limbs cyanotic."

Guernsey, in recommending cuprum as one of the remedies for diseases of the brain, writes: "Convulsions and cramps are marked features of the case requiring cuprum. The cerebral disease is the result of metastasis during an attack of catarrhal or exanthematic fever. The spasms and cramps commence in the extremities, and especially in the fingers and toes; inability to hold the head up; grinding of the teeth."

In Bell and Laird, the italicized symptoms only have been selected in their description of it: "vomiting relieved by drinking cold water; restlessness, tossing about and constant uneasiness.

Sunken, deep eyes, with blue rings around them. Desire for warm food and drinks. Violent vomiting of bile; of water containing flakes, with violent colic and cramps. Spasm of the stomach. Deathly feeling of constriction beneath the sternum. Violent spasms in the abdomen and upper and lower limbs, with piercing screams. Spasms of the throat, preventing speech. Dyspnœa so intense that he cannot bear a handkerchief before the face. Violent cramps in legs and feet. Intense coldness and blueness of the surface, with long-continued general cold sweat and great prostration. General convulsions, with continued vomiting and violent colic. Uræmic eclampsia, with loquacious delirium, followed by apathy, cold tongue and breath, and collapse. Spasms, with blue face, and thumbs clenched across the palms of the hands. The cramps particularly affect the flexors, the muscles often drawing up into visible knots."

Now, there it is, the same thing over and over again. More of it can be found in Hering's "Materia Medica," and still more of it in his "Guiding Symptoms."

By actual count, it requires less than one hundred words to describe cuprum in such a manner that it would be of practical working value, and about eight hundred words to back up the statement.

Caprum has not less than seven hundred symptoms, and each symptom has its value. It would be possible to commit to memory all the symptoms of cuprum, but to memorize all the symptoms of all the remedies would require a brain run by a different motor than the one in use at present. Therefore, we must devise a plan by which these valuable agents may be accurately utilized. No one could give an intelligent description of cuprum, or of any other remedy, without incorporating its genius, any more readily than he could prescribe the remedy, and claim that it was indicated. if he were not entirely influenced by that genius. The stuff might be descriptive of any remedy, and about as recognizable as a butterfly without wings wandering about as a freak nondescript.

Vomiting, purging, pain, headache, prostration, vertigo and chilliness—that would describe lots of cases, but it would be absolutely bereft of any therapeutic value; and yet such a case

could not exist without being stamped by an individuality. More than that, the genius of a remedy would be there to direct us in our selection of the appropriate curative or palliative agent, and all of us have experienced what the accurately applied medicine will accomplish.

We have seen it arrest and cure cases, or, in event of fatal illness, we have witnessed the comforting effect of amelioration. However, whether the patient improved, got well, or died, haphazard guesswork in thereapeutics passed into antiquity when the law of similars exalted medicine to the position of an exact science.

A COMPARISON OF NATRUM MUR., PULSATILLA AND SEPIA.

MARY A. COOK, M.D., PHILADELPHIA.

It is not my purpose to make any attempt to cover the whole field of the thereapeutic action of these three most valuable drugs, for such a comparison would far outstrip the limit assigned to these papers, to say nothing of the tax on your patience. My object rather is to bring out a few points and mark the more prominent symptoms which would lead us to the selection of one of these remedies, especially in gynæcological cases, as in these cases, many times, the selection of the right drug seems to me to be beset with difficulties which do not confront us in diseases of other classes.

In a paper of this kind one must necessarily draw largely from the printed literature on these drugs; so I will here mention some of the works I have consulted, thinking it less confusing to do so now than to refer each symptom, as I mention it, to the authority or authorities from which it is taken.

The books which I have especially consulted, and many of which refer to Hahnemann's provings, are as follows: Hering, Farrington, Hughes, Burt, Hemple and Arndt, "Regional and and Comparative Materia Medica" by Malcolm and Moss, Lilienthal, Raue, "Searches in Homœopathic Therapeutics"

by Nash, together with other miscellaneous sources of information.

First, as to the general sphere of action. Under Natrum mur. there is a general scorbutic condition causing degeneration of blood and tissues, anæmia, and deficient nutrition. Is said to act particularly on posterior portion of spinal cord and on vegetative nervous system. There is emaciation and prostration of nervous forces. The secretions are altered in character and often become excoriating.

Pulsatilla acts on the mucous membranes, causing catarrhal condition, with discharge, after a short stage of dryness, of thick mucus. The discharges are bland and non-irritating, as a rule, under this drug. It also acts on blood-vessels and synovial membrane, and on the sexual organs, especially the ovaries. Has more affinity for left side of body. There is great depression of spirits, as the patient cannot bear pain. Changeableness of the symptoms is characteristic of this drug. The patient is depressed and tearful while suffering, and has a corresponding rise of spirits as soon as the pain is relieved. Pains change from place to place, increase gradually in severity, and then suddenly cease. Pulsatilla acts on the vascular system, especially the right side of the heart, veins and capillaries. For this reason, though the patients are subject to much chilliness, they suffer in a warm room, especially if it is close, and are better in the open air.

Sepia has venous congestions, causing relaxation and a consequent dragging of various organs. Its principal action is on the gastro-intestinal tract, the skin, organs of respiration, and especially on the sexual organs. Has a disturbing influence on the vaso-motor system, and on the nervous system governing animal life. The patient is languid, prostrated, faint. The viscera drag and give rise to the well-known all-gone feelings. There is aggravation from sleep, because the relaxation of the system is then increased, and relief of many symptoms from slow motion. The secretions are offensive and often excoriating. The skin is disposed to eruptions, discoloration and desquamation.

Mental Conditions.—Under Natrum mur. there is great melan-

choly, depression and sadness. Frequent weeping, but, unlike Pulsatilla, consolation aggravates the patient. She likes to dwell on past unpleasant occurrences. Becomes easily angered. There is indifference and loss of memory. A condition of nervous excitement is easily brought on, and the emotion causes headaches. The indifference seems to arise from hopelessness or mental languor. There may be a hurried feeling, with anxiety and palpitation of the heart. We may even find religious melancholy. There is an inclination to become angered at trifles, and every little offence is stored up in the mind.

The Pulsatilla patient suffers from depression of spirits when suffering. She is of a timid, fearful disposition, and often is anxious, irritable—may be even hypochondriacal. When well she may be bright and cheerful, but she is depressed by suffering, and cannot bear it as well as others of a different disposition. There may be a corresponding elation of spirits when the pain is removed.

Unlike the Natrum mur. and Sepia patients, she is benefited by sympathy and consolation, which seem to make her sufferings more bearable. Pain makes her weep, but the smiles come easily when relieved. Children, when this drug is indicated, are apt to be peevish and fretful. The patient is easily fatigued by mental labor. After slight emotions there may be difficult breathing. There are bad effects from fright, mortification, or even excessive joy. We may find anxiety as to the outcome of the disease out of all proportion to the severity of its symptoms, or there may be forebodings and fear of some impending disaster without any cause for it except her own disordered imagination.

Sepia is more often indicated in persons with dark hair and inclined to a sallow complexion, as the Pulsatilla patient is fair, with yellow hair and blue eyes. Among the mental conditions of this drug (Sepia) we find the following:

The patient is often very sad and fearful about her own health. She may be depressed and anxious, or fearful, with a sense of helplessness. She becomes indifferent about her household affairs and to the members of her own family. She may even exhibit an aversion to her daily occupations, and also to those

nearest and dearest to her and of whom she has formerly been very fond: and yet there may be no suspicion that she is losing her reason. We may have great susceptibility to excitement, and still more to terror. Dread of being alone. Inability for mental activity. Frequent attacks of weeping, and even despair of life. The memory seems weakened. Antagonistic states. Is easily offended, and inclined to be vehement and to indulge in lasting hatred of those whom she thinks have injured her. May be great irritability, alternating with indifference. She cannot bear to be found fault with. All ailments are aggravated by anger and vexation. Excitement and disturbed feelings cause congestion of head and chest. Animated conversation causes hot face, and perspiration follows excitement.

Head Symptoms.—Natrum mur. has dull headache, almost constantly; also violent throbbing headache, as though forehead would burst. Sometimes this pain is described as a feeling as though numberless little hammers were working in the brain. A bursting pain, with heat in the head, and accompanied with nausea and vomiting before or during menstruation, or immediately following the period. The headaches are usually most severe in the morning on awakening, or the pain may increase as the day advances until midday, and then decrease. The pains are worse from heat and mental exertion. Pain as if nail were driven into left side of the head. This drug is very useful in chronic headaches, which come in paroxysms, and by their throbbing character would lead one to think of belladonna, only that the patient is anæmic.

Under Pulsatilla there may be headaches from menstrual derangement or a disordered stomach. Usually the latter will come from rich food. We may also have those of a rheumatic and neuralgic origin. From either of the first named causes there may be accompanying nausea and vomiting. The pain is usually in forehead, supra-orbital regions or temple; is of a heavy or throbbing character, usually worse in evening; is aggravated by mental exertion and stooping, and heat. Often relieved by pressure, cold applications, and in cool air. Vertigo, which comes on when sitting, and is improved by walking in the open air.

The Sepia headache is very frequently associated with diseases of the reproductive system, though this is by no means their only origin. Sometimes the pain comes in terrific shocks. The face is apt to be pale, yellow, waxy. The headaches of this drug may be accompanied with hysterical symptoms, such as jerking of the head backwards and forwards.

One condition under which Sepia may be useful is hemicrania, usually in left side of head (but may affect either side). The pain is accompanied by nausea and vomiting; the pupils are contracted; the suffering is aggravated from being in-doors, or from fast walking, or anything which jars the body. Is improved by rest and in open air.

There is a pulsating headache in cerebellum, beginning in the morning and lasting until noon, and sometimes until evening. Worse from motion, and when turning the eyes; better during rest and in the dark.

Boring headache from within outwards. Great heat in head, with burning in the ears; difficulty of hearing, with dimness of vision. Also sensation of coldness in vertex; worse when moving the head and stooping; better at rest and in the open air.

Digestive Symptoms.—Nat. mur. has excessive thirst. Complains of tongue being dry, but it does not look so. Tongue may present little denuded spots, the so-called mapped tongue, or may have a white coating. Anorexia, or, on the other hand, there may be excessive hunger: but the food does not seem to nourish these patients, as they continue emaciated. The taste may be altered, being saltish or bitter. Often a great longing for salt. Aversion to bread is also one of the characteristics of this remedy. Blisters round mouth, and on tongue; may have ulcers in mouth. Tenderness and burning feeling at pit of stomach. Eating produces a distended feeling of stomach and abdomen, with distressed feeling, which is better from tightening the clothing.

If diarrhœa be present, the stools are watery, greenish, sometimes bloody, produce excoriation, and are accompanied with a feeling of weakness and exhaustion.

In constipation there is great difficulty of expulsion of stool; anus feels very sore; after defecation may be fissured. Consti-

pation may cause hypochondriasis, and after bowels are moved patient seems improved in every way.

Pulsatilla. The tongue is whitish, coated thickly, and covered with a tenacious mucus. May feel as if burned or scalded. Though mouth feels dry there is no thirst, and water taken is apt to produce nausea. Sometimes we find a complete loss of taste, for which this drug is very useful. If this occurs in catarrhal conditions, it is usually accompanied by loss of smell. Or there may be a perversion of taste, food tasting bitter or putrid. Digestion is slow and gives rise to many uncomfortable symptoms. A feeling of tightness after eating; the clothing must be loosened. Chilliness after eating. Sensation as if food had not entered the stomach, but was lodged in œsophagus. Taste of food returns to mouth for some time after eating. Nausea and vomiting of small amounts of undigested food. Feeling as if a stone were in the epigastrium. Perceptible pulsation at pit of stomach. Attacks of cardialgia, induced by eating rich food, too much ice-cream, etc.; also nausea and vomiting from the same causes.

If the bowels are constipated, the stools are large and the constipation obstinate. In diarrhœa the attacks are more frequent after midnight. May occur from fright, from taking cold, or disordered digestion. The stools contain much mucus, or are watery. Preceded by colic, or may be accompanied by faintness. Stools changeable in appearance, no two being alike.

The Sepia tongue is large, pale and flabby. The coating is yellow or brownish. The taste is bitter, coppery, or putrid. Frequent eructations, tasting badly. Very characteristic is a faint, sinking feeling in epigastrium, which is relieved by eating. The epigastrium is not painful to pressure. There is a desire for vinegar and acids. The stomach symptoms are aggravated by taking milk. Often much dull sore pain in the region of the liver. Bilious symptoms, and those traceable to a disturbed portal circulation. Distention of abdomen, with flatus. If diarrhœa, the stool is jelly-like, or contains much green mucus, and is accompanied with colic and tenesmus. When constipation is present, we find the symptom "feeling as of a ball in

rectum, not relieved by stool." The stools are small and difficult. As we should expect from the retarded portal circulation, hæmorrhoids are present, which are very painful.

Uterine Symptoms.—The woman for whom we may prescribe Nat. mur. with success is usually anæmic; may have a tendency to chlorosis. The menses are apt to be delayed and scanty. During the flow she suffers from nausea and chilliness. Palpitation of heart and a disposition to faint accompany the dysmenorrhœa. Sad and gloomy at periods. Suffers from the characteristic headache. The leucorrhœa is excoriating, and there is a tendency to erosions of mucous surface. Vagina is dry, and may be itching of mucous membranes from irritating condition of discharges. The urine partakes of the same irritating character, and there is burning and cutting after urination. The urine is dark—often contains a reddish sediment. Prolapsus uteri: feels worse on arising in the morning. It seems as if she must sit down to prevent the uterus from protruding. This condition of bearing down is marked, and the patient often imagines herself to have a much greater degree of prolapsus than really exists. She suffers from backache, which is relieved by lying flat on the back and by pressure.

Pulsatilla has much abdominal soreness with ovarian irritation. It is one of our most useful remedies in amenorrhœa, whether delay of the establishment of the first menses or suppression of the flow after it has become established. Very useful where, with absence of the flow, there is soreness of apices of the lungs, or even where there is hæmoptysis or hæmatemesis with amenorrhœa. Menses usually too late, scanty, and of short duration. The blood generally dark and clotted. Dysmenorrhœa, with bearing-down pain in back, often accompanied with nausea, dysuria, chilliness, and characteristic aggravations. If vomiting is present, cold drinks will relieve, while warm ones are vomited. Crampy, colicky pains predominate, griping pains which double the patient up, and are very distressing, especially to one of her disposition. Though scanty flow is most characteristic of the drug, we may find Pulsatilla useful in uterine hæmorrhage or threatened abortion, when the accompanying symptoms indicate it. The flow of blood will be changeable; stops and flows; is mixed with clots.

The leucorrhœa is usually milky, thick and bland. During labor, pains are deficient and irregular. After labor, when uterine inertia and placenta is retained. Among urinary symptoms ineffectual urging, and at times involuntary urination.

Sepia. As we should expect from a drug which exhibits so much relaxation and congestion as Sepia, all the uterine complaints are characterized by much bearing down. The symptoms are usually aggravated in the morning and evening, and better in the afternoon. The dragging seems to come from sacrum to abdomen, and the patient experiences the feeling that she must cross the legs to prevent the protrusion of the uterus. The menses are usually scanty, and often too late, but may be too early. The flow is accompanied by a weak, distressed feeling in the stomach and abdomen. The bearing down is usually a more marked symptom than severe pain at the time of the period. In the general relaxed condition the ovaries are also involved, and we shall have symptoms which are referable to prolapsed ovaries. Though the flow is more often scanty, we may find menorrhagia with the characteristic bearing down and pain in the small of the back. This generally occurs at the climacteric. Accompanying this we find the characteristic offensive perspiration. Leucorrhœa is mucous, yellow, watery, or of a sanguineous character. May be offensive; is often irritating, and causes pruritus. Sepia is useful when we find an enlarged and congested uterus, with induration of the cervix. Also for soreness of abdomen, with pains shooting from cervix towards umbilicus. Useful in threatened abortion, with evidences of disturbed circulation and relaxed condition of the tissues.

Sepia presents many urinary symptoms. Prominent among them are increased urination, especially at night, and urine having a very offensive odor and depositing a pinkish sediment, which is very difficult to remove.

I have thus briefly endeavored to recall a few of the most prominent features of these drugs, and to emphasize a few of the points of differentiation between them. So, if this effort seems fragmentary and incomplete, I can only plead that I have selected those points which appealed most forcibly to my mind, and, as I said at the outset, did not attempt anything like an exhaustive study of these remedies.

SERUM-THERAPY AND NOSODES.

EDWARD CRANCH, M.D., ERIE.

THE following is a short paper, not of research, but of opinion, written to encourage inquiry and debate. The right position of the substances called therapeutic serums and nosodes is still in obscurity, and their true relation to the philosophy of medicine generally is unrecognized. The course of reasoning with which the serums have been introduced is this: frequent inoculations of healthy animals with certain disease-products at first infect, but, when continued, develop a resistance to their influence—therefore the blood-serum of an animal in such a state of resistance is to be injected into the veins of persons exposed to the same diseases, in the hope of conveying, to the well or sick, complete immunity or recovery.

Opposed to this conclusion and practice are, first, the fact that infectious diseases do not always excite the required resistance or immunity, and, second, the great difficulty, not to say impossibility, of avoiding admixtures of other diseases and putrefactive changes. Statistics in the matter are wonderfully conflicting from different observers and from different localities. Late reports from Italy, besides condemning vaccination, mention many remarkable cures of tetanus by the injection of carbolic acid, without any serum, thus certainly avoiding the putrefactive and disease-breeding dangers of serum, and suggesting the uselessness of serum in general.

The "testing" of animals by tuberculin, before using them for serum or vaccine, only adds to the dangers of the practice by introducing an unknown toxic element into the serum or vaccine to be used on human beings. Over against reported immunizations and cures, and favorable modifications of disease, are to be placed the many disagreeable, dangerous and unforeseen complications that have arisen or that may arise.

The indiscriminate use of all sorts of disease-products as medicines for similar disease-conditions, and for alleged immu-

nization, must sooner or later give way to the only rational, safe and useful course, namely, the potentizing and systematic proving of such poisons, and their employment under the rules of genuine individualizing Homœopathy, just as, to-day, we are using psorinum and variolinum, and are beginning to use tuberculinum, pyrogen, and others. In the language of the Apostle Paul, "Prove all things, hold fast that which is good."

CYCLAMEN—PULSATILLA.

AUG. KORNDŒRFER, SR., M.D., PHILADELPHIA.

Attention is called to these remedies, not by reason of anything new or novel in either pathogenesis or therapeutics, but simply to emphasize the need for greater care in their differentiation for homœopathic use.

Certain groups of symptoms occur in each, which, by their marked similarity, quite frequently lead the unwary prescriber into error. In fact, the symptoms of cyclamen and pulsatilla parallel to such a degree that Lippe called cyclamen the "thirsty pulsatilla."

A brief review of these two remedies will serve to elucidate the thought in point. Beginning with the mental symptoms, we find the anxious, solicitous state of mind, so characteristic of pulsatilla, a marked condition of cyclamen, though in the latter remedy it manifests itself more especially in relation to the moral sphere of "duty" toward others. In the pathogenesis this is expressed as a "sense of duty neglected," or "as if guilty of some offense or crime;" whereas in pulsatilla it has regard to the physical well-being of the individual, a care of self, "a solicitude as to one's health," or an anxiety on account of "imaginary affronts" or "personal slights" from others.

Further analysis will show that, despite the moral sense of guilt and anxiety as to duty, the cyclamen patient often manifests an obstinate and faultfinding disposition, whereas, though the pulsatilla patient dwells so much upon self, the disposition will

invariably prove to be mild, yielding and tearful in character. The pulsatilla patient can and does do much complaining, and with many tears, but never manifests the obstinacy so characteristic of the cyclamen. Pulsatilla talks much of her sufferings, whereas the cyclamen patient has "no desire to talk," but rather "sit in a reverie."

Again, the headaches are very similar, though on more careful analysis we find decided throbbing in pulsatilla, which does not occur in cyclamen; both, however, have stitching and contracting as well as tearing pains.

Both remedies have "puffiness around the eyes," though in the cyclamen it is more marked in the upper lids. Both have dryness of the eyes, cyclamen "with itching," pulsatilla "with sensation of sand in the eyes." Both have dimness of vision, cyclamen "as if looking through dark-blue glasses," or "like mist before the eyes;" pulsatilla "like a fog" or "a veil before the eyes."

It is worthy of remark that clinical experience seems to prove that the amblyopia of pulsatilla is intimately related to suppression of the menses, to gouty or rheumatic conditions, or to gastric derangements.

The coryza of cyclamen is watery and light in color; that of pulsatilla is yellowish or greenish, muco-purulent, and thick.

The gastro-intestinal symptoms present much similarity, though the marked thirst of the cyclamen will always serve for differentiation. In addition, cyclamen has predominantly sour or rancid eructations, whereas pulsatilla is characterized by bitter, slimy or insipid eructations.

The menstrual blood of each is dark and thick; in cyclamen profuse; in pulsatilla scanty.

The respiratory symptoms parallel in many respects. Thus both have cough from tickling in the larynx; both are worse at night, though cyclamen is worse during sleep, pulsatilla preventing sleep.

Such marked similarity in the pathogenesis naturally suggests the thought that these two remedies must needs occupy equally wide fields of use in practice. Clinical experience, however, proves contrarywise. Pulsatilla has become a polychrest

of great importance, while cyclamen remains among the remedies but seldom used.

Although this certainly largely depends upon an inherent limitation in the therapeutic field of the cyclamen, it no doubt also, to a degree, depends upon neglect of the remedy as a useful curative agent.

One object in presenting this paper is to call attention to the cyclamen as a valuable though neglected remedy, to emphasize which I have indicated with great brevity its characteristic similarity to pulsatilla, and at the same time have pointed to the most impressive features for differentiation.

Another interesting thought to which I must call your attention is, that these two remedies afford a most noteworthy exemplification of the importance of Hahnemann's teachings in regard to the value of the modalities in the selection of the curative agent. A few comparisons of modalities governing each may prove both interesting and instructive. It has already been remarked that cyclamen is characterized by great thirst, whereas pulsatilla is thirstless. Cyclamen manifests predominantly "dread of fresh air," "feels better in a room," and "when sitting." Pulsatilla, on the contrary, has "great desire for fresh air," "feels better in the open, cool air," especially "when walking slowly." From these few examples it will be observed that, although the pathogeneses of these two remedies show a remarkable degree of similarity, it is equally true, nevertheless, that the modalities giving type to these symptoms invariably and unmistakably mark a distinction in the therapeutic sphere of each.

Having thus briefly shown the close symptomatic relationship between the cyclamen and pulsatilla, let us further illustrate our theme by citing a few such points of similarity in pulsatilla and rhus toxicodendron.

Every practitioner will extol the virtues of pulsatilla in the treatment of various forms of gastro-intestinal disorders, yet many have wondered why, occasionally, in cases where it appeared well-indicated, the result proved to be very unsatisfactory.

The solution of this problem is found in the fact that the

similarity between the drug-symptoms and such diseased conditions is but superficial.

Thus, for instance, the pulsatilla gastric disorders are commonly characterized by "fullness or heaviness, as from a stone in the stomach, after eating;" "pressure in the pit of the stomach, as if swollen;" "pulsation in the pit of the stomach;" "eructations with nausea;" "inordinate hunger and inclination to vomit;" yet each and all of these are quite characteristic of rhus toxicodendron. Can we wonder, then, if failure follows a selection of pulsatilla where rhus is the true similimum? The modalities which give type to these symptoms must be heeded, else failure is assured. Thus we will find the mild and tearful disposition, the thirstlessness, rancid eructations, bitter or offensive taste, heartburn and heavily furred tongue of the pulsatilla standing in marked contrast to the restless and impatient mood, the thirst, tasteless eructations, flat taste and yellowish-white furred tongue, with its triangular red tip, of the rhus patient, offering ready means for differentiation. I have frequently confirmed the efficacy of the rhus in such gastric conditions.

Similar parallelism in the symptoms of other remedies is quite common, and to the non-critical student of materia medica offers one of the most trying obstacles to the accurate therapeutic application of our remedies.

Success comes alone from study.

THE VALUE OF ACONITE IN SO-CALLED HEART FAILURE.

C. S. MIDDLETON, M.D., PHILADELPHIA.

In the earlier days of my practice it was no uncommon thing to sneer at the many laudatory articles written by the late Dr. Hemphill in behalf of aconite.

I do not wish to have it appear that upon the shoulders of the writer has fallen the mantle of Elisha (Dr. Hemphill), but I do want to call a halt, in so far as a neglect of many of our old,

reliable homœopathic remedies is concerned, and the use of expedients and temporary prescriptions—many times to the disadvantage of both the patient and the doctor.

Dr. Hemphill, we youngsters thought, was under the impression that he could cure everything with aconite—and I fancy the time came to all of us when *we* wished we *could*.

As an evidence of the estimation in which he held this important remedy, let me quote a short extract from his Materia Medica:

"This medicine constitutes the backbone, as it were, of our materia medica. . . . I shall be enabled to show you that there is hardly an acute disease where this medicine is not required, more or less. Even in many chronic diseases aconite may prove a useful, yea, an indispensable agent."

Laying all levity aside, it will appear to many practitioners, in time, that aconite is of service in many conditions other than acute fever, with hot, dry skin and a bounding pulse, for the very reason just stated—because other and more serious conditions sometimes follow, as a secondary state, in which aconite is useful.

It is true, aconite is indicated most in the acute and inflammatory affections; but there are conditions in which this drug can be made to do great good following acute attacks, when serious lesions remain, such as certain forms of paralysis, due to an antecedent effusion and consequent incapacity of nerve-fibre, and other states, due to altered nutrition, following inflammation and congestion. But the point I have started out to make is the relation aconite bears to heart failure, and it is not my intention to enter into the discussion of its merits in other directions. It is true there are other remedies which have a great influence on the heart's action, either as a stimulant, primarily, or as a profound depressant.

Digitalis, for instance, is at first liable to increase the frequency of the pulse, then to depress the movements of the heart by modifying the frequency of beats, through the vasomotor nerves of the plexus, and slow the action down to a most dangerous situation, if the dose be large enough. This is a dangerous drug to use without great care in critical cases.

Its action is like that of an engine—the strokes of the piston may be made to occur at very infrequent intervals, but the power may be retained; yet, again, the strokes *may* be made so slowly as to finally be unable to overcome the resistance. So, with the action of digitalis in excessive doses, the heart may become so depressed, even while the pulse may not show a corresponding warning, that the least movement of the patient may prove too much of an exertion, and death ensue.

Glonoine and strychnia are notably heart-stimulants—the one apparently through its effect upon the arterioles (dilating them, and thus relieving the load thrown back upon the heart), the other by directly vivifying the nerve-centres, thus enabling the worn-out heart to push on a little further in its effort to sustain life. Amyl nitrite acts much like a combination of the two last named, and is often of great service in agonizing attacks of angina pectoris, but owing to its intense action it is a dangerous drug to use without great caution.

While not intending to draw accurate comparisons between the several foregoing drugs and strictly homœopathically applied remedies, they have been alluded to in order to strengthen the point in regard to the homœopathicity of aconite in its relation to heart failures. It is such a common procedure with many physicians to use the hypodermic syringe charged with a solution of some one of the heart stimulants that I wish to utter a word of caution, especially to the younger members of the profession. This caution is not proclaimed in any Pharisaical sense, for I am guilty of possessing a hypodermic syringe myself, but because of the indiscriminate and hasty use of makeshifts, instead of first having faith in our remedies, and, secondly, in exercising our best skill and judgment in prescribing according to pathological, and symptomatic indications.

Aconite is a "paralyzer" in the truest sense of the word, and it does its work quickly when taken in sufficiently large doses: therefore, as we need a quick-acting remedy, we not only possess one in aconite, but we also have a remedy which is frequently *indicated*, not only physiologically but homœopathically, in these urgent cases. By virtue of the virulent

poison that aconite contains, immediately after taking the drug into the mouth in appreciable quantities a tingling and benumbing sensation is produced which will extend to the stomach and bowels and to the more remote parts of the body, the extremities, and later to the nerve-trunks and heart. So quickly does this drug act that in some instances death has taken place in a few minutes, and in others in from two to four hours; and when recovery takes place, the effects pass off in about eight hours.

In addition to this general paralytic effect, aconite seems to act directly upon the heart if applied to or over that organ, arresting its action while in diastole; and in cases where the paralysis of the trunk-nerves was not so pronounced, and recovery was expected, death has occurred suddenly from cardiac failure.

In the proving of aconite, the symptoms of the chest and cardiac locality are sufficiently significant to indicate its action there; and, when taken in connection with its general action and the class of cases in which we so often encounter heart failures, acute pneumonia and rheumatism, especially when endo,- myo- or pericarditis has become a complication, aconite will often render the service we desire, and save life.

Let us briefly draw a picture of the most prominent features of a case of failure of cardiac action in, say, lobar pneumonia. Firstly, we have an acute inflammatory disease to contend with in which aconite is very often of the greatest importance in the earlier stages, and, if indicated, in all probability will avert the much-dreaded sequence which we are now considering. In passing, it seems impossible to avoid directing attention to the fact that cases treated homœopathically are much less liable to heart failure than those under the old school. The patient, having already suffered with oppression, pain in the chest, soreness, cough, high grade of fever, delirium, now manifests an intensified degree of oppression, perhaps more rapid beating of the heart, steadily increasing in frequency and diminishing in force and volume, first probably a warm sweat, more or less profuse, finally becoming cold, and pulse almost or quite imperceptible, restlessness, and patient becoming more or less comatose.

These conditions I fancy you will all recognize as being a fair outline of a state usually very grave, and which we call heart failure, no matter whether increased congestion and inflammation has taken place in the affected side or whether a pneumonic process has supervened in the opposite lung as a cause, or whether there are other causes which we are unable to divine. Now, at the risk of repetition, I do not wish to be understood as intimating that aconite is the only remedy in all these cases, nor that we must wait for its use until such a grave condition has presented itself, nor that, in a case of this or any other character, we must have symptoms that are manifestations of its poisonous effect, or *proving*, if you please, to indicate it, but, I repeat, I wish to call attention to *homœopathic* remedies *first*, and then to not forget that with drugs like aconite, that can *kill*, we sometimes get the most valuable indications for their use in such cases approaching death from disease.

In aconite, therefore, we have often the most satisfactory indications for such a case as we have stated, in its earliest stages, as is shown by the symptoms in the provings; and if the disease progresses, and persists in approaching death, we still have a remedy which, by its more intense action (poisonous provings), is indicated, and still homœopathic.

If, now, we compare the action of aconite upon the system in its poisonous effect—an extreme proving—and that of some disease in an extreme case in which heart failure is manifest, we will be confronted with an array of symptoms at once most similar, both pathologically and homœopathically.

The numbness and loss of power over a limb or limbs and great muscular debility attest the general tendency to paralysis, which indeed is often present; and dyspnœa, weight about the heart, weak and imperceptible pulse, cold sweat and utterly collapsed condition indicate the gravity of the effect which aconite is capable of producing.

Quoting a few of the symptoms in poisonous cases will probably not be amiss in establishing the resemblance: "Pulse irregular and slow (54); irregular, soft, as if the blood did not fill the arteries; apex-beat once against the chest, while three pulse-

beats were distinctly felt at the wrist; beats of the left ventricle were synchronous, with radial pulse; right auricle seemed convulsed; its movements were rapid, irregular, and bore no proportion to beats of ventricle: dyspnœa; died in 4 hours from suffocation and general collapse of circulation." In another case of poisoning: "Great muscular debility, oppression of the chest, . . . prostration, weight about the heart, pulse imperceptible, fainting, cold sweat. Death seems to have occurred from apoplexia and paralysis of the heart." Another: "Pulse imperceptible, respiration hurried, head covered with cold sweat, strength and spirits exhausted; pulse returned, but remained intermittent and irregular; sometimes two or three beats in rapid succession, then making a stop of as long a period; dyspnœa. Post-mortem: heart relaxed, containing small quantity of black blood; from condition of the lungs, died of pulmonary apoplexia and paralysis of the heart."

It seems useless to repeat other provings in this line, as the similarity of symptoms are sufficiently apparent.

Believing in the indication of the *drug* first, and the preparation next, I have used aconite in dilution and in tincture, and also in a solution of aconitine, ten minims of which were equal to one thirty-sixth of a grain of the alkaloid. This was used in water in intervals as frequently as seemed required by the urgency of the case, and I believe with satisfactory results.

THE NEED OF A STANDARD PHARMACOPŒIA.

CHARLES MOHR, M.D., PHILADELPHIA.

As long ago as June, 1868, the pharmacists of the homœopathic school recognized the fact that "in homœopathic pharmacy it is of great importance that there should be: First, Uniformity of Preparation; Second, Uniformity of Notation; Third, Uniformity of Measure;" and at a meeting of homœopathic pharmaceutists, attended by William Radde, F. E. Boericke, John T. S. Smith, G. W. Smith, A. J. Tafel,

Henry M. Smith and others, an association was formed and styled the "American Institute of Homœopathic Pharmacy," for the purpose of securing such uniformity. Other meetings were subsequently held, and the co-operation of physicians was believed to be absolutely necessary, Dr. F. E. Boericke stating that "the physicians should take the initiative, state what medicines they wanted and how they were to be prepared, and that the pharmaceutists should follow their directions." The records of a meeting held at Cincinnati, June 30, 1869, show that the principal pharmacists of the country were unanimous in the opinion that a pharmacopœia would be most valuable if gotten up by the co-operation of physicians and pharmaceutists. At this same meeting the society was informed that the American Institute of Homœopathy had appointed a committee to devise a plan for the publication of a pharmacopœia, and requested a conference with the committee appointed by the American Institute of Pharmacy, consisting of J. T. S. Smith, H. M. Smith, F. E. Boericke, A. J. Tafel and G. W. Smith.

Notwithstanding numerous conferences and the appointment of committee after committee by the American Institute of Homœopathy, it was not until 1897 that the *Pharmacopœia of the American Institute of Homœopathy* was published, and Pemberton Dudley, M.D., and Eugene H. Porter, M.D., President and Secretary, respectively, of the American Institute of Homœopathy, in the Introduction, commend the work, on behalf of the National Association, as "useful to physician and pharmacist, student and instructor," because it would promote "uniformity in the strength and quality of medicinal preparations."

After thirty years of earnest discussion and hard labor by such physicians as Carroll Dunham and Jabez P. Dake, and such pharmacists as F. E. Boericke and A. J. Tafel—not to mention the score or more of other disinterested and efficient workers—it would seem that the work above mentioned, issued by authority of the American Institute of Homœopathy, should be received unqualifiedly as the standard pharmacopœia. Such, however, is not the case, as there have been many criticisms

and rebellions; but, it is to be noted, not so much in the spirit of progress and science as in the prevailing spirit of the commercialism of the times.

There are about twenty-five pharmaceutic firms now doing a large business in the United States, growing rich in providing the practitioners of homœopathy with the preparations required by them; but, instead of invariably furnishing medicines uniform in strength and quality—so consistently and insistently demanded by the votaries of homœopathy—they are furnished with preparations made according to the methods of more than a half-dozen different authorities. And, worse than all, latter-day practitioners of homœopathy, perplexed and confounded by the divergent views of physicians and pharmaceutists of their own school as to the relative strength of tinctures, the preparations of dilutions from triturations of insoluble substances, etc., are deliberately buying tinctures, fluid extracts and triturates from ordinary manufacturing chemists and pharmacists, and then, when cases do not respond to medicines if administered according to a symptomatic resemblance of disease phenomena to drug phenomena as recorded in provings, the provings are discredited, and homœopathy itself is condemned by its own practitioners.

The further progress and success of our school of practice demand that *one* Pharmacopœia shall be the accepted standard for all official preparations throughout the United States, and from every homœopathic pharmacist in the country the homœopathic physician should be able to procure these at any and all times.

At the last meeting of the American Institute of Homœopathy, held in June, 1899, at Atlantic City, the official Pharmacopœia received a due share of attention, and after a discussion of its merits and demerits, the latter being found of minor importance, it was resolved to authorize the printing of a second edition, corrected under the supervision of a committee of revision, consisting of a number of well-known physicians and pharmacists.

This action, following so soon after the appearance of the first edition, is expressive of the need of the homœopathic

school. Indeed, in its attempt to unify homœopathic pharmacy by the publication of a standard guide, the American Institute of Homœopathy should receive the hearty thanks of every physician, and every loyal homœopathist should procure medicines only from pharmaceutists who follow the official Pharmacopœia in their preparation, for on such concerted action depends the scientific stability and progress of homœopathy itself.

DISCUSSION.

Dr. T. H. Carmichael: I want to heartily endorse all that has been said in this paper, and to give practical effect to the recommendation that Dr. Mohr made. I would like to make a motion:

That the Pennsylvania State Society endorses the Pharmacopœia of the American Institute of Homœopathy, and recommends it to all of its members and the profession in general as a thoroughly reliable, up-to-date standard work, for the preparation of homœopathic remedies.

In this we are taking the initiative. The Massachusetts Society, more than a year ago, took such action, and I believe that it is being taken more or less throughout the country. There is no doubt about it, that such action will have to be taken. The demand for an official, uniform, standard preparation of our remedies has been felt for a long time, and some such action by the various State Societies will give particular force and effect to it.

I would like to appeal to the members right here in reference to the new work, and especially to the objections that are made on the part of firms using different works, on the ground, for instance, of the strength of the tinctures. The strength recommended, which is made uniform, in so far as it would be possible, except such as phosphorus and so-called tinctures, is that of one-tenth—that is, that the tincture represents one-tenth the strength of the dried plant, not that the tincture is made from it, but taking the dried plant as a unit. That will be found not only to be of a uniform strength, but a strength that is almost a maximum strength, much stronger than most of the tinctures made under the other pharmacopœias. And do not

be influenced by an agent who comes around and shows you a tincture three degrees darker in color, and compares it with the new pharmacopœia, and says if you buy a tincture made from the new pharmacopœia you are getting weaker tinctures. In Atlantic City there was a tincture made by about a dozen different pharmacists—about a dozen different colors—and that is due very frequently to the fact that the green plant has not been collected at the same time the tincture has been made. If it is a tincture made immediately, it is possibly a very dark tincture and one-tenth strength, but it may be of a different shade if made later. Therefore, do not be deceived by the color of the tincture. This method for securing a uniform strength is universally commended in the old school, and there has been, so far as I know, no adverse criticism from the old school; it all comes from our own profession. I hope that we can, in this way, give our endorsement, this afternoon, to the new pharmacopœia.

Dr. R. E. Tomlin: I would like to second the motion, having the honor to be a member of the American Institute, as well as of this Society, and I consider the proposition in the paper of Dr. Mohr as thoroughly proven. I would like to say a word or two more, that I have been perplexed at times in having one and then another of the agents of the various pharmaceutical companies coming into my office with their varying preparations, and I have been considerably annoyed, at times almost disconcerted, about what to buy. This subject is one of the very gravest importance—the relation between the patient and doctor, and as to what we shall use—and I can think of no better action that this Society shall take than the motion of Dr. Carmichael, in support of Dr. Mohr's paper.

President: If I understand the motion of Dr. Carmichael, it is to this effect: that the Homœopathic Medical Society of the State of Pennsylvania endorses the homœopathic pharmacopœia, published under the auspices of the American Institute of Homœopathy, as being the standard authority for the preparation of homœopathic medicines in the United States.

Dr. T. H. Carmichael: I would suggest that you substitute the title of the pharmacopœia—"The Pharmacopœia

of the American Institute of Homœopathy." (Motion seconded and carried.)

By direction of the President the original motion of Dr. Carmichael was then altered to read as follows: "That the Homœopathic Medical Society of the State of Pennsylvania endorses the Pharmacopœia of the American Institute of Homœopathy, and recommends it to all its members and the profession in general as the standard work for the preparation of homœopathic remedies."

MENTAL CHARACTERISTICS TABULATED FOR STUDY.

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Object of this Paper.—The object of this paper is to plead for the study of symptomatology, and to tabulate some mental characteristics by way of illustrating a method of the study of this symptomatology.

Justification of Symptom Study.—The symptoms of the case on the one hand and the symptoms of the remedy on the other are the parallel phenomena on which is based the science of homœopathy. Our idea of the proper application of this science to practice is not that it is the simple matching of symptoms in the narrow sense of that term, but that it does, of course, consist in the comparison of like symptoms with like symptoms in the broader sense. The study of our Materia Medica does not consist in the memorizing of symptoms as they come, or from the repertory, but it does consist in the study of their significance and importance, and in the memorizing most carefully of certain symptoms according to their rank of importance. We must become familiar with the symptoms of remedies in order to apply these curatives to disease. To become familiar we must study, and to study we must memorize.

Relation of Symptom and "Genius."—In the proving of remedies we observe an individuality clearly distinguishing them

from one another. This has been aptly termed the "genius" of the remedy. Here is no mean field for study, as essential for the veriest beginner as it is essential every day in practice and essential for every day's study during a natural life time. The harder one studies, the plainer becomes that "picture of the remedy" we so often hear about but which we do not seem to be able to paint. Pope's criticism becomes self-evident—

> "One science only will one genius fit,
> So vast is art, so narrow human wit."

This "genius," "picture," "general characteristic," or whatever you please to term it, of the remedy, it is claimed, is present whenever and wherever that remedy is successfully exhibited. It impresses itself upon the significance of its symptoms, so that it becomes a part of their individuality. We could with propriety speak of the "genius" of the symptom, for is not the "restlessness" of acon. distinct, as also the "restlessness" of arsen., of rhus., of camph., coff., nux vom., ferr., ant. t., cham., and the host of others? The same holds good with every other symptom, and their differentiation is the fine art referred to.

The study of the "genius" of a remedy as a whole becomes one department of Materia Medica, and we claim the study of symptomatology a distinct and separate one. Symptomatology is General Materia Medica, and the analysis and study of remedies as a whole to comprehend their "genius" Special Materia Medica, bearing the same relation to each other as do General and Special Pathology, General and Special Diagnosis, etc.

Before leaving this subject, we wish to say that a knowledge of the "genius" of a remedy or symptom does not imply nor presuppose an ability to explain physiologically or pathologically the existence of such a symptom as we would use in a proving, any more than we can know the scientific reason for the presence of every pathological symptom of our case. We have not succeeded in evolving a plausible theory regarding the existence of laws themselves—why should we insist upon doing so regarding details?

On the other hand, we also see no danger nor disgrace to

try to fathom these mysteries by modern scientific methods, and to benefit by each and every successful result attained by such an investigation. Undoubtedly every symptom of disease and remedy does have its *raison d'être*, and it is our duty as conscientious physicians to learn it if we can. To comprehend all about them would be a great help to successful prescribing; but, whether we know or know not, "the world do move," and the law is not affected by our ignorance.

Classification of Symptoms.—Allowing, then, that the study of individual symptoms of disease and remedy is laudable, it becomes necessary at once to set about making order out of chaos. Such an encyclopedic mass of material must be classified, divided and subdivided for comprehension and to be of any practical use. As a result we have rubrics galore; alphabetical and repertory arrangements; general symptoms and those possessing elective affinities to special organs or functions; subjective and objective symptoms: pathognomonic symptoms of disease on the one hand and keynotes of remedies on the other; the "more striking, singular, and uncommon" symptoms—the "peculiar" ones of the case, and the characteristic ones of the remedy; the first and late symptoms; the functional ones; the primary and reflex; absolute and contingent; etc., etc.

This is the first step a thinking mind takes after the proving has been accepted and recorded, and the result is many classes of many grades of value and of different degrees of importance to different minds. But we see no reason for bitter contentions on this score so long as under the same flag, even though differences of opinion do exist regarding their relative value. The clinical symptoms are to be marked, and the so-called untrustworthy are simply not incorporated into partisan Materia Medicas. The more of this classification the better, because it implies a careful study of symptoms for differences and resemblances, and consequently more thorough analysis, and a possibility of advance discovery. It looks like legitimate experimentation that ought not to be discouraged.

> "Gold begets in brethren hate;
> Gold in families debate;
> Gold does friendship separate;
> Gold does civil wars create."

Relative Value of a Few Classes.—The *objective* symptoms are for obvious reasons considered more reliable than are the *subjective* that must to a great extent be interpreted by a physician. On the contrary, subjective symptoms faithfully reported are more valuable for prescribing than are the objective symptoms.

Pathognomonic symptoms, *i.e.*, those diagnostic of some pathological state in the case, are invaluable in the selection of groups and classes of remedies from which the prescription should be made.

The "*peculiar, uncommon and striking*" symptoms in a case that should be the guide in differentiating and selecting the simillimum is Hahnemann's own classification, and the reasoning seems clear. For example, the "restlessness" of acon., ars., rhus., and a score or more remedies, must be differentiated. "Restlessness" is a common symptom. The more common the symptom, the larger this group of remedies that makes it common, and the more knowledge is necessary to select the simillimum. The less common and more peculiar the symptom, the smaller this group and the less difficult the prescription. Hahemann's rule regarding this class of symptoms becomes clear and possibly a reason for that rule. The "genius" is for the correct understanding of the symptom; the symptom is the requisite for prescribing: but the "peculiar" symptom, by which a case expresses its individuality, is the *most important* guide for the selection of the remedy.

Characteristic symptoms of the drug, on the other hand, are those that give character to the drug as an individual. They may be like a strand in the warp, running through the whole length of a tapestry, or like a "peculiar" stripe in the woof still characterizing its individual entity. They are symptoms, and together make up the general character or "genius" of the drug. These must be memorized, and, as an aid to recollection, must be compared after they have been classified. Differences and resemblances, and grouping into classes, help to fasten the individuality of a symptom and the "genius" of a remedy upon the mind. That is the method employed even unconsciously by men and women the world over to distinguish individuals.

Totality of Symptoms.—The "totality of symptoms" of the case means, as any one might suppose, all the symptoms of the case, whether pathognomonic or apparently insignificant, and no matter by what method or means discovered. To learn these is called "taking the case," and Dr. Carroll Dunham says it is the most difficult part of prescribing: "It requires great knowledge of human nature, of the history of disease, and of Materia Medica."

This "totality of symptoms" is not valuable because of the numerical number of symptoms that can be elicited, but valuable because, when well taken, it always contains the key to the best remedy for the case.

This "totality" given, our knowledge of Anatomy, Physiology, Pathology, etc., should afford us the best possible understanding of the case and the import of the individual symptoms. Many symptoms of this "totality" are totally worthless, and frequently those that seem most important, like the pathognomonic symptoms of the case, are of least value for prescribing; on the other hand, those apparently insignificant are often the guides to the proper remedy. These *trifling* symptoms arise probably from the peculiarity of the individual and make the case different from the patient's neighbor.

It is the "totality" of peculiarity in the case, therefore, that is of most value in prescribing; similarly, in the remedy, it is the "totality" of the characteristic symptoms that constitutes the "genius." Fit the one series to the other and *Similia Similibus Curentur* is magnificently illustrated.

"Totalities" are arrived at by synthesis, and not comprehended without a definite idea of the significance of each symptom as an individual. Consequently we suggest

A Plan for Study.—A plan for elementary study in symptomatology. By studying, we mean a fixing in the mind for ready recollection—memorizing. Memory is aided in this by arrangement, classification, tabulation, comparison and differentiation. Judgment must needs be the handmaid of memory, and a judicious selection of characterizing symptoms must be made.

These are classified—say according to a rubrical system. One division is selected for study. By way of illustration we

have taken the mental characteristics, because this is the most difficult and most extensive rubric, as well, probably, as the most important. Our teachers have impressed upon us the fact that has become apparent in practice, that the mental symptoms are very pronounced features of many drugs.

Three columns constitute the table. In the first is placed simply the names of the remedies in alphabetical order. In the second, the characterizing mental (in this instance) symptoms. In the third, such helpful hints, bearing upon the general character ("genius") of the remedy, it may be in comparison or differentiation, as are particularly suggested.

The drugs containing prominent mental characteristics are Acon., Act. rac., Agnus c., Ailanth., Aloe, Anac., Ant. cru., Apis, Arg. nit., Ars., Arum, Aur., Bapt., Bell., Borax, Bry., Camph., Carbo an., Caust., Cham., Cina, Cocc., Coff., Colch., Colo., Con., Cupr., Cycl., Dig., Dulc., Graph., Hyos., Ign., Jalapa, Lach., Lil. tig., Lycop., Merc., Mur. ac., Nat. c., Nat. m., Nux m., Nux vom., Petro., Phos., Plat., Plumb., Puls., Sec., Sep., Staph., Stram., Sulph., Thuja, Ver. alb., Ver. vir., and Zinc.

That this paper may not become too lengthy we shall treat only half of these more or less fully, according to our plan, to illustrate the thought and prove the desirability of such an arrangement.

This number of remedies—quite comprehensive—of those containing grand mental characteristics can be subdivided into classes that may still further elaborate the plan of aiding the memory and recollection. The material has been compiled from many sources.

Mind and Disposition.

Remedy.	Grand Characteristics.	Helpful Differential Hints.
Acon.	Great mental anxiety; fear of death; nervous feverish restlessness.	*Ars.* has these characteristics, but they occur in intense local diseases or typhoid types of fever. (Acon. fevers are sthenic or inflammatory.)
	"Acon. should not be given in any case which does not present a similar group of symptoms."—*Hahnemann.*	*Rhus.* also has these characteristics, but are due to aching pain from movement. (Acon. and ars. are *not* relieved by movement.)

Mind and Disposition.—(Continued.)

Remedy.	Grand Characteristics.	Helpful Differential Hints.
		Bry. has all these characteristics except the restlessness. Bry. is < from movement.
		Gels. (*per contra*) is drowsy and stupid, and has soft flowing compressible pulse. (Acon. pulse is hard, quick and bounding.)
		Ver. v. has more arterial excitement and less nervous excitement, and is characterized by a bright red streak in middle of tongue.
Act. rac.	Grieved and troubled with sighing.	*Ign.* has this symptom, but also a "goneness" at pit of stomach at the same time.
Agnus c.	Extreme absence of mind.	This symptom reminds of *anac.* the "plug" remedy. Has also a strong disposition to swear. Is better suited to females. (Agnus to "old sinners" with male sexual symptoms.)
		Lach. in loquacious or jealous women at the climacteric.
		Merc. has absence of mind, also fears of dying, like agnus. But there is greater weakness of body as well as mind. The "syphilitic" remedy (agnus in gonorrhœa and gleet). Better for young people (agnus, prematurely old). Its symptoms are pre-eminently worse at night.
		Natr. m. in cachectic, especially malarial.
		Nux m. the "sleepy" remedy. Better for women and children. (Agnus prematurely old and "old sinners.")
		Phos. ac. the most important analogue of agnus, with this mental symptom less prominent, and physical weakness more prominent. Is < in morning. Best in children that are growing too fast.
	Fear of death.	This symptom reminds one of acon. and ars., but on account of their "totality" are generally indicated in different classes of disease.
		Acon. fear of immediate death. (Agnus thinks it is of no use, as death is sure to come soon.)
		Ars. has great physical exhaustion, but not mental (agnus the reverse), and is rarely suited to the male sexual system. (Agnus frequently.)

Mind and Disposition.—(Continued.)

REMEDY.	GRAND CHARACTERISTICS.	HELPFUL DIFFERENTIAL HINTS.
Ailanth.	Semi-conscious; cannot comprehend what is said to him.	On acccount of its "totality," is oftenest indicated in low fevers, when ailanth., bapt., gels., phos. ac. and rhus, all having this symptom, suggest themselves for differentiation: Great prostration; all have it. *Phos. ac.*, < in morning. *Rhus*, < at rest. Nose and mouth: *Ail.*, has horribly offensive discharge; *Bapt.*, worse if possible; *Gels.*, absent; *Phos. ac.*, dryness and bleeding; *Rhus*, bloody saliva runs out of mouth during sleep. Face: *Ailanth.*, dark red; *Bapt.*, darker; *Gels.*, less marked; *Phos. ac.*, pale; *Rhus*, sunken, with blue rings around eyes. Eruption: *Ailanth.*, thickest on face and forehead; *Bapt.*, thickest on body; *Rhus.*, irregular and dark red, sometimes vesicular. Scarlatina: *Ailanth.*, malignant scarlatina; *Bapt.*, malignant scarlatina; *Gels.*, malignant scarlatina, with tendency to convulsions; *Phos. ac.*, does not have the eruption of scarlatina, and does not reach the very low types of fever. General: *Ailanth.*, drowsy and stupid; *Bapt.*, "scattered about" symptom possibly; *Rhus*, restless.
Aloe.	Great disinclination to mental labor.	*Aloe* and *Nux v.*: This symptom more prominent under nux than aloe. Condition: *Aloe*, best in phlegmatic, indolent and old people. *Nux*, best in nervous, choleric mental workers of sedentary habits, and in irritable debauchers. Diarrhœa and Dysentery: *Aloe*, urgency and insecurity; profuse stools; great rumbling before, and great prostration after stools; bloody, jelly like discharges.

Mind and Disposition.—(Continued.)

Remedy.	Grand Characteristics.	Helpful Differential Hints.
		Nux, frequent urgency and inability ; scanty stools, and better adapted to constipation.
		Hæmorrhoids : *Aloe*, protrude like a bunch of grapes after each stool.
		Nux, itching hæmorrhoids, causing wakefulness; bleeding hæmorrhoids, with ineffectual urging.
Anac.	Great weakness of memory.	Suggests agnus c., lach., merc., natr. m., nux m., phos. ac. (See under *Agnus c.*)
	Irresistible desire to curse and swear.	This symptom, like many others equally ludicrous, is often the guidance for the selection of the curative remedy.
	Feels as though he had two wills, one urging him to do what the other forbids. ("Plug remedy.")	*Nitric acid*, *lil. tig.* and *v. alb.* have this : Nitric acid, after the abuse of merc.; lil. tig., uterine irritation is abated when this symptom comes ; v. alb., curses all night, with headache and ptyalism.
Ant. c.	Peevish, don't want to be touched or looked at.	This symptom suggests prominently for differentiation : Cham., cina, staph., and bry. and nux.
		Ant. cr., thick, milky-white coating of tongue, is a most prominent differentiating characteristic.
		Cham., wants to be carried (ant. c., the reverse) ; for teething babies especially.
		Cina, cries if anyone would carry it (like ant. c.). In children with the group of so-called "worm symptoms," not pinworms. (These symptoms do not indicate ant. c.)
		Staph., desires things, and then pushes them away indignantly when offered. In scrofulous children particularly. Affects bones and glands especially (ant. c. affects mucous membranes in general).
		Bry., like staph., desires things and then pushes them away, but is inclined to be more angry. (Ant. c., peevish.) Disorders of the digestive system often bring up these two remedies for differentiation, but bry. tongue is white down the middle and clean on edges (ant. c., milky-white all over).
		Nux v., nux and bry. mental symptoms are alike, but bry. has much more of the "rheumatic diathesis." Both are best adapted to dark-complexioned subjects. (Ant. c., adapted to "both ends of life," and to patients that grow fat.)

Mind and Disposition.—(Continued.)

Remedy.	Grand Characteristics.	Helpful Differential Hints.
Bapt.	Confused mind; especially possessed of the idea that he is trying to collect the several parts of the body; feels as if they were scattered about.	*Bapt., typhoid condition;* characteristic mental symptoms, with restless feelings, bruised feeling all over, dusky red face, red shining edges on tongue, diarrhœa, often painless, with tenesmus and very offensive stools. *Gels.*, very much like bapt., only milder. *Rhus*, very much like bapt., but has a triangular red tip to tongue, and stools less offensive.
	"The king of all remedies for typhoid conditions."	*Lach.*, much like bapt., but for worse cases, with trembling tongue, catching on teeth, even approaching cerebral paralysis, dropping of lower jaw and involuntary discharges.
Bell.	Wild delirium and violent headache, with flushed face, throbbing carotids, hard and bounding pulse. (Symptoms come and go suddenly.)	Three (3) delirium remedies: Bell., stram., hyos. Violence, bell. and stram., more violent than hyos. *Bell.*, violent generally, stupid exceptionally. *Hyos.*, stupid and muttering, with only occasional outbreaks. Convulsions, stram. most; bell. less; hyos. least. Face, bell., flushed; hyos., pale and sunken; stram., muscles constantly in play. Fever, bell. much; stram. less; hyos. least.
	The remedy in acute congestions and inflammations, and in the true Sydenham scarlet fever.	Might be characterized as, bell., congestive; stram., loquacious; hyos., lascivious. Three diseases suggested: bell., scarlatina; stram., delirium tremens; hyos., typhoid. Remember bell. for sudden appearance and sudden disappearance of symptoms. *Stram.*, < from shining objects. *Hyos.*, sensorial activity and nervous excitement.
Borax.	Fear of downward motion on rocking.	*Gels.*, in intermittent fever, seems to be the only other remedy having this symptom. Any motion but the downward motion will not awaken child.
Bryonia.	Irritable and easily angered.	This symptom suggests no disease particularly, but when present in any disease, is strongly characteristic. Is common to many remedies, but especially in: *Cham.*, in teething children (and nervous, excitable persons); *Nux*, in high livers and mental workers;

Mind and Disposition.—(Continued.)

Remedy.	Grand Characteristics.	Helpful Differential Hints.
		Ign., in hysterical females (and nervous children); *Bry.*, in bilious, dark-complexioned, rheumatic people; *Staph.*, in scrofulous subjects. This symptom in fever, especially typhoid, suggests: *Acon.*, nervous, restless and perhaps fear of death. (Bry., mental confusion, especially a "desire to go home"). Indicated early but rarely (bry., later and often). *Bell.*, indicated only early (bry., excellent later). Much delirium and violent (bry. less). Head throbbing (bry., "splitting"), < sitting up (bry., > keeping quiet). *Rhus*, marked restlessness, and > from motion (bry., quiet and < from motion). Both have nose bleed and rheumatic pains. Tongue brown, dry and even cracked, with red tip. (Bry., dry and white.) Often diarrhœa from the first. (Bry., usually constipation.) *Bry.* is also an excellent anti-rheumatic, anti-dyspeptic and anti-cough remedy, especially when this irritability is present. (Considered under their respective rubrics.)
Camph.	Great anxiety and extreme restlessness.	A symptom prominent in many other remedies, and must accompany other symptoms of camph. to be of any use whatever. It suggests, however, particularly: *Acon.* in sthenic or inflammatory fevers; *Ars.* in fevers of typhoid type; *Rhus* due to the pains > from motion. "*Camph.* in choleraic conditions, with collapse predominating; "*V. alb.* in choleraic conditions, with the evacuations and vomiting most prominent; "*Cuprum* in choleraic conditions, with cramps most prominent."—*Dunham.*
Carbo an.	Desire to be alone; sad.	Of no use as an isolated symptom, but characteristic of this drug when in combination with other symptoms, especially

Mind and Disposition.—(Continued.)

Remedy.	Grand Characteristics.	Helpful Differential Hints.
		of glandular system or digestive organs (q. v.).
		Common to many remedies, but must be differentiated, especially from:
		Conium acts similarly on the glandular system, producing induration, even cancerous condition (like carbo an.), but better adapted to old people (carbo an. is better adapted to venous constitutions).
		Hydrastis very similar to carbo an. and con. in glandular diseases, but has very few or no mental symptoms.
Cham.	Peevish.	*Cham.*, wants to be carried, but not looked at. Whines, wants and refuses things when offered. Violent anger. Especially in teething children.
		Cina, objects to being carried or touched. Especially in vermicular affections.
		Ant. c., don't want to be touched or looked at. Sulky. Especially in affections of the mucous membranes in general.
		Staph., does not want and pushes things away indignantly when offered. Especially in scrofulous children.
	Irritable, and results of anger.	*Puls.*, much milder anger.
		Bry., more violent, if possible, than cham., and less peevish.
		Nux, violent anger in thin, spare patients of sedentary or dissipating habits.
		Colo., violent anger, like cham., but no hot sweat on head of babies like cham.
	Excessive sensitiveness to pain. "The catnip of homœopathy." "The opium of homœopathy." "The anger remedy."	*Coff.*, specially adapted to nervous, excitable persons (cham. also, but particularly to children teething). Greater activity of all senses, but less peevishness than cham. Dry heat of face. with red cheeks (cham., apt to have only one red cheek). Symptoms caused by pleasurable emotions (cham., by anger). Cham. is preferable in coffee drinkers.
		Cinch., has peevishness and irritability (cham., less marked), and excessive sensitiveness of the nervous system; but also has great prostration, with neither thirst nor hunger present in almost all its complaints. (Cham., has great thirst.)

Mind and Disposition.—(Continued.)

Remedy.	Grand Characteristics.	Helpful Differential Hints.
		Cinch., has pale or yellow face (cham., the red cheek). *Aur.*, peevish, irritable and excessively sensitive to pain. Suited especially to scrofulous adults of sanguine temperament, with tendency to suicidal mania and with despondency. *Ign.* also has all these symptoms ; but this is especially the "moody" remedy, while cham. is the "anger" remedy. More especially suited to hysterical females. Symptoms are caused by grief (cham., by anger).
Cina.	Cross, nervous, irritable and peevish.	This remedy has this group of symptoms, par excellence, all that could be caused by cham., ant. cru., staph. and bry., and in addition to all, cries piteously if any one would take hold or carry it. These and other worm symptoms are caused by cina. Urine becomes milky after standing awhile, is a good differential symptom. (See ant. cru. and cham.)
Coff.	Greatest activity of mind and special senses ; great sensitiveness to pain ; sleeplessness from excitement.	*Coff.*, one or more of these conditions are always present. *Cham.* has all these symptoms and must often be preferred, as in coffee drinkers. The irritability of cham. is spiteful and peevish (of coff., nervous and wakeful). The insupportable pains are > by cold only for an instant (in coff., cold > permanently). The sleeplessness is due to pains (in coff., it is due to nervous excitement). *Acon.* also has very similar mental and nervous symptoms, but has nervous restlessness ; coff., nervous excitability. Activity of special senses not so great as in coff. Has fear of death that coff. does not have. Sleeplessness with great restlessness ; in coff. the patient is quiet, but wide awake on account of mental activity and acuteness of special senses.
Hyos.	Excessive nervous excitement ; immodest ; will not be covered.	*Hyos.*, delirium, mania, convulsions. *Bell.*, mania, very wild, with congestion, even inflammation of brain.

Mind and Disposition.—(Continued.)

Remedy.	Grand Characteristics.	Helpful Differential Hints.
		Stram., mania, loquacious, but good-natured and less than bell., but more convulsions, especially of upper part of body.
		Hyos., mania, lascivious and more loquacious than stram. Quarrelsome, and may be without fever and weak.
		Plat., mania, religious.
Ign.	Silent grief and its effects.	*Phos. ac.*, chronic grief and its effects.
		Puls., sadness and melancholy, but tearful and makes known her sorrows.
	Frequent sighing, with "goneness at pit of stomach."	*Hydras.*, *Sepia*, } "goneness" at pit of stomach, but no sighing.
	Changeable mood.	Changeable mood suggests acon., coff., nux m.
		Acon., plethoric, sedentary persons with rigid fibre. (Ign., hysterical women and nervous children.)
		Coff., lively fancies and characteristic excitement.
		Nux m., sleepy and drowsy (ign., sleepless).
		Ign., has particularly a finely sensitive mood, but also a peculiar alternation of different moods.
	Contrariness of symptoms. "Entgegengesetzte nebenbeschwerden."—*Dr. Wurmb.* "The remedy of moods."	As, during chill, thirst and does not want to be covered; during fever, no thirst and wants to be covered; pains > by pressure or lying on it; sore throat < when swallowing; toothache > when chewing; headache > when stooping; irritation to cough < from coughing; alternate laughing and crying, etc.
Jalapa.	Child "good" all day; screaming, restless and very troublesome all night.	This occurs with colic and diarrhœa, at once suggesting cham.
		Nerves: Crying day and night (jalapa only at night). Stilled by being carried.
		Stool: Green and mucous, and very offensive (jalapa, bloody and watery, and sour smelling).
		Face: Red cheek, with fever (jalapa, blue face, with general coldness).
Lach.	Loquacity, patient jumping from subject to subject.	*Act. rac.* in hysterical, rheumatic women (lach. at climateric). Puerperal fever or suppressed menses (lach., typhoid fever, with diarrhœa and great exhaustion). Pain sharp and lancinating (lach., prick-

Mind and Disposition.—(Concluded.)

Remedy.	Grand Characteristics.	Helpful Differential Hints.
		ing, pulsating, tearing). Must move about (lach., trembles, especially hands). Marked sleeplessness (lach., sleepy, but unable to sleep).
		Paris quad., loquacity, like that caused by tea—a vivacity with love of prattling.
		Stram., simple loquacity, with red face (lach., pale face).
		Agar. stands between stram. and lach.
	Jealousy.	*Hyos.*, with rage and delirium (lach., with loquacity).
	"It alone should immortalize Hering."	*Apis.*, in mania from uterine and ovarian irritation (lach. at climacteric). Sleepiness (lach., sleepy, but cannot sleep).
Mur. ac.	Inclination to slide down in bed because of excessive prostration, as in typhoid.	This symptom is found prominently also in:
		Ant. t., in diseases of the respiratory tract, where mur. ac. is not apt to cover the totality.
		Ars., in low fevers, like late in typhoid, but with the characteristic thirst, restlessness and emaciation added to the prostration of mur. ac., < after midnight and > from warmth.
		Bapt., besotted face, tongue red on edges.
		Bell., in scarlatina with this symptom, but here it is due to congestion of the brain and not so serious as when indicating mur. ac.
		Cinch., intermittent types of fever.
		Hell., stupefaction. Slow to answer (mur. ac., irritable).
		Lyc., with excessive flatulence (mur. ac. has some), and < four to eight P.M.

HINTS IN STUDYING THE MATERIA MEDICA.

GEORGE W. SMITH, M.D., PHILADELPHIA.

THE Materia Medica is the most formidable of all the studies which confront the student of Homœopathic medicine, and this is not surprising when we take into consideration the innumerable symptoms under each of the great number of remedies which have already been proven, or said to have been proven, and then realize the fact that a vast number of other drugs have not as yet been discovered. The recorded symptoms which we have presented to us are not only almost infinite in number, but are apparently conflicting, very often under the same drug, and almost identical under many others, and for a person to undertake to remember what he sees in most of our Materia Medicas is a hopeless task. If it is possible to lighten this task in any way it should be done freely, and if each one of us can assist by even a few suggestions, let us do so willingly, and great good will be accomplished. In the study of this science, as in many others, the student endeavors to memorize certain asserted facts, and as he extends his study he will soon find himself in a complete labyrinth from which it is impossible to extract himself, and the more he pursues this course the deeper and deeper will he become involved.

In taking up our Materia Medica as a study, the first thing that we should have impressed upon our minds is for us not to undertake too much. Do not endeavor to understand too many drugs. Study thoroughly the most important, and after these have been mastered then extend the study to others, taking them up in the order of their importance and the reliability of their recorded provings. It is far better to thoroughly understand one single drug than have but a very imperfect idea of dozens; and he who has a proper knowledge of the polychrests will be a much more successful prescriber than he who endeavors to grasp the whole Materia Medica

and has but a confused and imperfect knowledge of any. The great difficulty met with in teachers and students is that too many drugs are presented and studied at a time; and not only are these drugs studied, but all their recorded symptoms are gone over and tried to be understood, when many of them are perfectly unreliable and totally unworthy of the attention that is given to them, many having been published without any careful comparison or verification whatever, and frequently from the deplorable desire of the writers to have their names appear in print.

It is a very easy matter for a person to thus criticise, but when a criticism is thus made there should be some suggestion of how to overcome the difficulty. As already stated, the best way to study our Materia Medica understandingly is, first, not to undertake too much. Select a few of the most important drugs, the polychrests, for instance. These have been successfully used for years, many of their recorded actions are thoroughly reliable, they have been proven over and over again, not only on the healthy, but their curative properties have been established time and time again in the sick room. After having selected these remedies, first study the drug itself, understand it thoroughly, find out carefully its specific action on all the organs and tissues of the human body, and after having a complete knowledge of the drug, we will find that its true symptoms must necessarily follow as a logical deduction, and the great mass of symptoms will become plain and easy of comprehension. By tracing out the various symptoms and discovering their true relations to the general action of the drug, we will soon become very much interested in the study, and the Materia Medica, as a science, is robbed of its terrors, and we find there is a truth and accuracy throughout all the symptoms of the various drugs that impress them more firmly upon our minds, and we unconsciously acquire a thorough and true knowledge of all that we study.

This fact has been recognized by all those who have secured the best knowledge of our Materia Medica in times past, and must be so recognized by those who expect to acquire such a knowledge either in the present or the future, and it is not

spoken of now as anything new, but rather to have it impressed on the minds of those who may not have had their attention called to these facts, or who may have entirely overlooked the matter, and who are groping in the dark and endeavoring to attain the impossible by studying the symptomatology of drugs without thoroughly understanding the action of the drug itself, and then using this general action as the key to the concomitant symptoms which must necessarily accompany such action. To illustrate this fact let us take a drug that is probably thoroughly understood by all of us, and which it will not be necessary for us to treat too exhaustively for the sake of illustration, for we can all readily understand that a thorough study of such a drug would be too voluminous for an occasion of this kind, and would merely tire your patience more than be of any benefit.

We will select arsenic as being probably one of the best known of the polychrests, and whose general action and numerous symptoms are more or less perfectly understood by all of you; and if we trace back the history of arsenic, and its study in relation to its homœopathic curative properties, we will find that Hahnemann himself studied the drug exactly as has been mentioned above. Quoting from Hull's "Jahr.," we find that "Hahnemann, in his first essay on the homœopathic principle, asserts that it has a great tendency to excite that spasm in the blood-vessels, and the shock in the nervous system, called febrile rigor. If it be given in a pretty large dose to an adult, this rigor becomes very evident. This tendency makes it a powerful remedy as a similar acting medicine in intermittent fever; and this all the more as it possesses the power, observed by me, of exciting a daily-recurring although always weaker paroxysm, even although its use be discontinued. In typical diseases of all kinds, this type exciting property of arsenic in small doses becomes valuable, and will, I venture to guess, become invaluable to our perhaps bolder, more observant and more cautious posterity. The continued use of arsenic in large doses causes gradually an almost constant febrile state; it will thus, as indeed experience has to a certain extent taught us, prove useful in hectic and remittent fevers, as a similarly act-

ing remedy in small doses. It possesses a great disposition to diminish the vital heat and the tone of the muscular fibre. Hence paralysis from a strong dose, or a long-continued and incautious employment of it. It diminishes the tone of the muscular fibre by diminishing the tone and cohesion of the coagulable lymph of the blood, as I have convinced myself by drawing blood from persons suffering from the effects of arsenic, more especially such as had a too inspissated blood before the use of this metallic acid. It also diminishes the sensibility of the nerves. Thus it generally seems to kill more by extinguishing the vital power and sensibility than by corrosive and inflammatory power, which is only local and circumscribed. It weakens the absorbent system. I would direct particular attention to this peculiar power of increasing the irritability of the fibre, especially of the system of the vital functions. Hence cough, and hence the above mentioned febrile actions. When used for a length of time, and in pretty large doses, it seldom fails to cause some chronic cutaneous disease. It produces acute continued pains in the joints, as I have seen." Thus you see that Hahnemann studied carefully the general action of this drug, and thus accounted for its symptoms in certain diseases.

From other writers we learn that it produces a violent irritation of the alimentary canal and other mucous membranes, with general depression. If there is little sign of irritation, there is excessive prostration and fainting, and if its action is prolonged, the nervous system becomes involved, producing excessive restlessness, emaciation, paralysis, etc. From this general action we can readily account for its most important and guiding symptoms, such as vomiting, restlessness, thirst, etc., which are nearly always present in diseases calling for arsenic. Then by going still further, and learning its action on the different organs of the body, we will readily see what symptoms must necessarily follow, and instead of endeavoring to remember a long list of apparently conflicting symptoms, by thoroughly understanding the drug itself we will recognize a symptom that we may never have seen mentioned, but which will become impressed as a necessary outcome of this general action.

If we study our drugs in this way we will have a comprehensive knowledge of them, and after understanding the most important we can extend our study to others, and widen our knowledge understandingly and permanently. In active practice we will frequently meet with symptoms and conditions that may not be mentioned in any of the drugs that we have thus studied, and it will become necessary for us to study up these particular symptoms in a larger field, but when thus found they also will become impressed upon our minds, as nothing impresses us so firmly as actual experience, and thus we will add little by little from this and that source, so that we will become surprised at ourselves and find that we are acquiring a firm and thorough knowledge of the Materia Medica, are better able to cope with disease, and more and more worthy of that great and ennobling title of being a good homœopathic physician.

STROPHANTHUS.

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This remarkable tropical plant, interesting in its almost classic history as an arrow poison, is worthy of a more exhaustive study and a wider clinical application than can be devoted to it in this brief paper. The genus Strophanthus contains some twenty species, and are mostly climbing shrubs, all but one tropical, growing in equatorial Africa, southern Asia, and some of the Pacific Islands. The strophanthus seeds of commerce are mostly from the *Strophanthus hispidus*. These yield a neutral glucoside (an amorphous deliquescent powder, freely soluble in water and in alcohol), called strophanthin, and an alkaloid called inæine. Strophanthin, the active principle, is supposed to contain all the poisonous medicinal properties of the plant, but, owing to the difficulties in obtaining, has had limited use.

The pharmacological action of strophanthus, summed up briefly, finds its chief action primarily as a muscle poison,

affecting all striped muscles, but more vigorously the heart than ordinary muscular tissue. Post-mortem rigidity follows fatal doses without the heart relaxing from exaggerated systole, leading to the hypothesis of certain direct stimuli to motor centres and ganglia. Blood-pressure tracings show no appreciable rise, which has caused observers to conclude that its marked diuretic action depends not so much upon its effects on circulation as a direct influence upon the secreting structure of the kidneys.

The therapeutic knowledge of strophanthus rests almost entirely with the clinician, there having been no exhaustive provings recorded; consequently, the following symptomatic applications are entirely derived from the crucial field of experience, which simply accentuate its homœopathic similium, based upon its toxic history. Compared with digitalis, we find in the effects of strophanthus some points common to both remedies, viz., they both increase the force of systole, and the primary effect to diminish the rapidity of beat with irregularity and variation of the rhythm. Strophanthus, not affecting the blood-vessels, causes but slight change in blood pressure, whereas digitalis causes increased tension and pressure of the whole arterial system, to which factor its diuretic properties are due. The gastro-intestinal disturbances are much less marked in continued exhibition of strophanthus than in digitalis. The action of strophanthus is quicker and more ephemeral than with its rival, digitalis, seeming also to have no cumulative properties.

We find the greatest sphere of clinical usefulness for strophanthus in the acute and functional disturbances of the heart, although it will prove often of great service in organic diseases. As arnica represents the panacea for bruised, tired and exhausted muscular tissue, so strophanthus will soothe and quiet a congested heart which is laboring and embarrassed by unusual strain put upon it; palpitation; irregularity, with pale face; anxiety and faintness in athletes and wheelmen, with dull, distressing pain in the precordial region. Violent exertion, such as mountain-climbing, running, etc., causing painful, throbbing dyspnœa, with cyanosis and anxiety. Precordial

pain long after the acute symptoms have passed away, the systolic beat remaining accentuated. Certain embarrassment symptomatic of circulatory disturbances during climacteric period, with aching through hips and extensor muscles of thighs, are promptly relieved by strophanthus. We find it more commonly useful among those active, energetic types of nervo-sanguine temperament who have more energy and ambition than muscle, and are constantly exhausting and overtaxing the physical powers. Exaggerated cardiac action in these cases, with the concomitant train of conditions, can usually be controlled by strophanthus more kindly than by any other cardiac remedy. Dyspnœa and œdema are markedly ameliorated in chronic cardiac degeneration. The œdema of acute and chronic nephritis, in the earlier stages, is frequently benefited through the diuretic action of the drug, but later it does not have the prompt and decided effect which marks the exhibition of digitalis in these cases.

REPORT OF THE SECTION OF GYNÆCOLOGY.

A Plea for the Exploratory Abdominal Incision, by Daniel J. Baker, M.D.
A Plea for a Closer Study of Remedies in Uterine Troubles, by T. M. Bulick, M.D.
Genital Auto-Infection, by T. J. Gramm, M.D.
Pelvic Hæmatocele, by Joseph Hancock, M.D.
Endometritis, by Pearl Starr, M.D.
Conservative Operations on the Tubes and Ovaries, by J. H. Thompson, M.D.

A PLEA FOR THE EXPLORATORY ABDOMINAL INCISION.

DANIEL J. BAKER, M.D., PHILADELPHIA.

Every operator of experience has observed the deplorable condition of patients who have been suffering from surgical conditions, perhaps for years, yet have been prevented from receiving the necessary attention by the fact that their attending physician has either not recognized it as a surgical condition or has ignored it; or perhaps he has gone so far as to restrain the patient from undergoing surgical treatment even though the patient desired it. Many practitioners seem to feel that to call in the expert implies a lack of ability on their own part, but I believe that the physician who is quick to recognize his inability to diagnose or to cope with an obscure condition, and at once calls in the specialist, gains infinitely rather than loses in the estimation of his patients.

In the diagnosis of abdominal conditions we are almost entirely deprived of the use of our visual sense, and, to a great extent, of our tactile sense also. Of course there are many such conditions that may be diagnosed, but there are not a few others that cannot be recognized by either the general practitioner or by the expert, and in these the only treatment that will result for the patient's good is to explore and determine

the condition accurately. This will at least enable us to treat the case intelligently, and affords an opportunity for radical treatment that may result in cure or great relief.

This subject opens such an immense field for discussion that I shall not enter into it, but will simply state my opinions, and, to substantiate them, cite a few cases which I observed as house surgeon in the female surgical ward in the Metropolitan Hospital, Blackwell's Island, New York. My visiting surgeon, Dr. Arthur T. Hills, who was seriously ill for a time, kindly permitted me to operate the cases in the presence of Dr. George Taylor Stewart, resident chief of staff, and later granted me the privilege of presenting this paper. The time that elapsed between the dates of admission and operation of these cases proves that they were not hurriedly subjected to surgical treatment as the quickest method of handling an obscure disorder. Each case was carefully examined, and received the best internal and local treatment possible before operative interference was sanctioned by the visiting surgeon and chief of staff. I began the observation of these cases with the ordinary beliefs regarding abdominal surgery, but completed it profoundly impressed with the truth of the following points:

1. Surgical cases are surgical from the beginning.

2. In obscure cases, or where there is grave doubt, our duty is to explore.

3. The sooner the operator is called in, the better, from the standpoints of ease of operation and increased chances in favor of the patient.

Case I.—A woman well past middle life who complained only of severe pain in both lower extremities, which were covered with immense varices apparently ready to rupture at any point, but especially just below the saphenous openings, where they stood out in masses nearly one-half the size of a man's fist. The varices did not disappear even when the patient was in bed, and were due to obstruction of the return circulation by a fibroid tumor of the uterus, which probably weighed twenty pounds, and which had been growing for fifteen years. Her condition was both deplorable and dangerous, but she refused to have the tumor removed because, six

or eight years ago, a physician had told her never to permit an operation. I could not but feel profound sympathy for this case, because the unwarranted advice of her former attendant had so influenced her that she was debarred from receiving the benefit of improved surgery. Her abdomen had not been examined, and therefore no accurate knowledge of her condition could have been possessed by the one who gave the advice.

Case II.—A. K. Age, 22. Married. Sweden. Housework. Admitted February 4, 1899, with a history of having aborted three weeks before. Her uterus was curetted by my predecessor, Dr. W. H. Rennie, who reported the case to me when I assumed charge of the ward, on March 1st, as having a retroverted uterus which she was anxious to have treated. About two weeks later, while I was trying to improve her general condition, she suddenly developed pleuritis in the lower right chest, laterally. This was readily cured with Bryonia 3x, but about two weeks later similar symptoms returned with no accompanying physical signs, and this time nothing gave relief. Knowing that disorders of pelvic organs often give rise to strange reflex symptoms, and as examination revealed nothing more than the retroverted uterus, we decided to explore, and at least correct the latter condition. The abdomen was opened on April 24th and the uterus discovered to be firmly bound down posteriorly, while on the left side appeared a pus tube and cystic ovary. These latter were removed and the former stitched to the anterior abdominal wall. On her recovery from anæsthesia she announced the absence of the chest pain, and after a perfect recovery she was discharged cured.

Case III.—R. M. Polish Jewess. Age, 20. Single. Domestic. Admitted March 24, 1899, suffering from severe burning and sticking pain in the left hypochondrium. Examination revealed a tumor in that region which was about one-half the size of an adult head, very resistant, but slightly fluctuating, and very sensitive. There was an almost total suppression of urine that apium virus, cantharis, turpentine, etc., failed to relieve. What few drops we could get contained a thick, stringy, white sediment. She grew rapidly worse; so, making a pro-

visional diagnosis of hydro- or pyonephrosis, I reported the case to Dr. Hills, who sent Dr. W. F. Honan to represent him. On April 6th Dr. Honan catheterized both ureters, but obtained only a few drops of clear urine from each. These were at once examined, with negative results. The same night apis 200 was administered internally, and in the next twenty-four hours the patient passed forty-two ounces of clear, pure urine. The tumor at once disappeared, but she immediately complained of severe but indefinite pain in the lower abdomen. Some six or nine months before this her uterus and adnexa had been removed for reasons unknown to me, and therefore we suspected pelvic adhesions as the cause of her suffering. On April 24th Dr. Stewart opened her abdomen and found no adhesions, but an acutely inflamed vermiform appendix, which he removed, with immediate cure of the symptoms. This case was intensely neurotic, and was later transferred to the medical ward for treatment of that condition.

Case IV.—B. D. (Negress.) Age, 20. Single. U. S. Housework. Admitted March 24, 1899, to the medical ward, and later transferred. She gave a history of sexual intercourse followed by a vaginal discharge and burning pain in the pelvis—not localized. Examination revealed gonorrhœal endometritis, and a retroverted uterus with partial prolapse. Local treatment failing, the uterus was curetted on April 24th. From this time the discharge ceased, but the pain persisted, and on April 27th her abdomen was opened, an enlarged and cystic ovary was removed from the left side, and the uterine displacement was corrected by ventrofixation. Slow recovery, but complete cure.

Case V.—J. S. Age, 20. Married. Austria. Button-hole worker. Admitted April 7, 1899. Her history was that she had begun the life of a prostitute three weeks before, and had soon after developed a profuse vaginal discharge and severe burning in both sides of the pelvis. Examination revealed a retroverted uterus and the worst case of gonorrhœal endometritis I ever saw. The uterine discharge was so profuse that is was impossible to keep her in a state of physical cleanliness. Her abdomen was so sensitive that I could not palpate

it. On April 21st the uterus was curetted, with only temporary cessation of the discharge and no relief of the pain. On April 28th the abdomen was opened, and the uterus and adnexa found to be tightly adherent posteriorly. They were loosened, and two large pus tubes were revealed and removed. The ovaries were also removed because of cystic degeneration, and the uterus was fastened to the anterior abdominal wall. She gained flesh as rapidly as she had previously lost it, but suffered some pelvic pain, which was best relieved by ignatia 30. Recovery complete.

Case VI.—C. P. Age, 35. Married (?). U. S. Housework. Admitted March 30, 1899. Brought in on a stretcher lying in a pool of blood and almost exsanguinated. She gave a history of bleeding from the vagina for two days, during which time she had been walking about the city trying to secure admission to some hospital. She further stated that, while in our ambulance, something in her pelvis suddenly gave way with excruciating pain and a tremendous gush of blood. Dr. Honan was in the operating-room, at once examined her, and removed a five and one-half months fœtus which had caught by its shoulders in the cervix. As the uterus was completely emptied it was douched, and the patient put to bed and stimulative treatment adopted. On this and the following night we used the subcutaneous saline infusion with gratifying results. Everything went well for a short time, but she developed an endometritis for which the uterus was curetted on April 21st. Following this she complained of a severe, indefinite pain in the pelvis which she could not localize. She deteriorated rapidly, and on April 27th an old laceration of the cervix was repaired, the abdomen was opened, and a pus tube and cystic ovary removed from the right side, along with an acutely inflamed appendix. The uterus being retroverted, this condition was corrected by ventrofixation. She was profoundly shocked, but made a complete recovery under stimulative treatment. The latter operation was performed by my senior assistant, Dr. George M. Chamberlin.

Case VII.—A. M. Age, 63. Married. Germany. Housework. Admitted April 12, 1899, to the medical ward, and

later transferred. She was very dull mentally, but said she had a falling of the womb on every attempt at defecation, with bearing down and distress in the pelvic region at other times. Examination revealed a retroverted uterus and a large sensitive mass in the left side of the pelvis which could not be outlined because of the thickness of her abdominal walls. She readily consented to an exploratory operation, which was performed on April 30th, and resulted in the removal of multilocular cysts of both ovaries and ventrofixation of the uterus. The cysts were of the same size and about one-half the size of a baseball. She immediately improved, both mentally and physically, and everything went well until the eighth day, when she developed septic symptoms and a prostration so profound that we could not resort to further surgical treatment. In spite of all we could do she died on the fifteenth day. Autopsy revealed a perfectly united wound and septic peritonitis, due to rupture of a stitch abscess which had developed beneath the abdominal muscles some distance to the left of the wound. The thickness of the abdominal walls, which contained a three-inch layer of fat, prevented us from localizing and removing the collection of pus.

These cases have not in any sense been selected, but are given just as they recurred to my mind. Coming, as they did, just at the close of my hospital experience, they convinced me of the truth of the statements made earlier in this paper, and are presented with the hope that someone may also be impressed with the value of early surgical treatment in obscure abdominal conditions.

DISCUSSION.

Dr. D. C. Kline: This is a very practical paper, so practical that it is a shame to pass it without a moment's consideration. I believe the doctor stated that many physicianshave erred in hesitating to refer these cases to the surgeon or to the specialist from the fear they would lose credit, but as a rule they gain credit. Frequently our patients are advised against operative measures by some professional man, when they would be greatly relieved by them. Recently I had under my care for several years a patient for whom I advised operative measures

three years ago, but who absolutely refused until six months ago, when she suffered from the same ovarian trouble. I am still convinced that the only method of permanent relief for her, and the only possible cure, is abdominal section.

Dr. D. J. Baker: I would only like to add to this paper one point which was brought to my notice very forcibly just before leaving the New York Terminal. I came across the city one morning with one of my former associates on the staff, who said that he had relieved a man in practice in whom he had the greatest difficulty to overcome the idea that his people, who were apparently of a very much higher social class than those at the hospital, could suffer from the same conditions as did those human wrecks with whom he had been associated so long on the Island. It has struck me very forcibly that one source of error in connection with these cases is that it does not seem possible to some physicians that people of a high social standing can suffer from these conditions as do the class of people you meet in a large charity connected with our large cities. I simply offer this suggestion as a possible source of error.

A PLEA FOR A CLOSER STUDY OF REMEDIES IN UTERINE TROUBLES.

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It is not my purpose to condemn the use of local treatment in uterine troubles, but I think it, at least in some instances, indispensable.

The various local applications and modus operandi of local treatment in uterine troubles are usually quite fully explained by those writing upon the subject, with occasional mention of a remedy or remedies which they have used to good purpose without giving the indication for the use of the remedy or remedies, thereby depriving the reader of just what he wants to know, viz., the symptoms which led to the choice of the remedy.

The object of this paper is to suggest the importance of a closer study of remedies and their indications, which may be used with benefit in uterine troubles. Among the many remedies which have been found useful in the treatment of uterine diseases I would mention:

Aletris farinosa: This remedy is found useful in women suffering from uterine troubles, with leucorrhœa accompanied by extreme constipation, with great suffering attending evacuation of the bowels, with weak digestion, heavy feeling in the stomach after eating.

Belladonna is indicated in dysmenorrhœa when the following symptoms are present: Congestion, with throbbing spasmodic pains in ovary and uterus, with downward pressure, heat and dryness of vagina and os uteri; spasm of the sphincter muscles, with cerebral excitement, menses too early, and in flooding, the blood is bright-red and hot; suppression of the menses, with rush of blood to the head and throbbing of the temples.

Cimicifuga: In prolapsus uteri with tendency to melancholia, ovarian neuralgia with shifting pains, rheumatic irritable uterus, dysmenorrhœa when pains are shifting, whenever uterine symptoms are present, with shifting myalgias or neuralgic pains, with or without pain on top and back of the head, think of cimicifuga.

Cal. carb: Menses too profuse, return too often, excitement causes menses to return, pressing down when standing, profuse leucorrhœa, milk-like with great weakness.

Cal. ostrearum may be used with benefit in delayed menstruation at puberty in girls who are plethoric and suffer from palpitation of the heart, dysmenorrhœa with headache, worse when ascending a hill or going up stairs.

Caulophyllum: In amenorrhœa in nervous hysterical women, continued spasmodic pains of the uterus (here think of secale, which has more continued pain); it may be used in prolapsus uteri, bearing down with great pain (here think of viburnum opulus, which has more continued pain in the back, coming around to the front); it is useful in leucorrhœa in little girls with profuse discharge and very weakening.

Gelsemium: Adapted to hysterical women, in dysmenorrhœa

with flow scanty and very painful, vertigo and headache, head feels enlarged with confused feeling in it, sharp pains in the uterus, hips and down the thighs, with bearing-down sensation of the uterus.

Helonias: In amenorrhœa from anemia, with soreness and aching weight in the womb, with tired aching and soreness in the back and legs. All accompanied with general debility.

Hydrastis: In uterine catarrh, endometritis with muco-purulent discharge and great debility, which may be accompanied with weak feeling at the pit of the stomach and palpitation of the heart.

Lachesis acts powerfully upon the uterine organs; it is useful during the climacteric period, with frequent uterine hæmorrhages, hot flushes with burning pains in the vertex and back, fainting spells, hyperesthesia of the uterine region, with great sensitiveness to pressure, menstruation irregular, scanty, or too profuse, pain with bearing down, relieved by flow of blood; all symptoms relieved by flow; leucorrhœa before menses copious, acrid, and offensive; ovaries tender, especially the left.

Lilium tigrinum: The provers of lilium report both prolapsus and retroversion with leucorrhœa, watery, yellowish, and excoriating, with irritation of the vaginal canal, heavy dragging sensation, feels the need of abdominal support much like sepia, except that in sepia the feeling for support from below the uterus is needed as given when the legs are crossed, irritation of the ovaries with tenderness, pain extending from ilium to ilium.

Sepia: The sepia patient has mucous congestion of the uterus and ovaries; the uterus is large and displaced, with offensive leucorrhœa, yellowish-green in color, with bearing-down pains in the abdomen and back, a feeling as if everything would be forced out through the vulva; relief from sitting with legs crossed, worse when standing or walking.

I do not pretend to have given all the symptoms in uterine diseases for the use of remedies mentioned, but would ask that a further and closer study be made, likewise of other remedies, as kali carb., lycopod., nux vom., pulsatilla, senega, sulphur, viburnum, etc.

GENITAL AUTO-INFECTION.

THEODORE J. GRAMM, M.D., PHILADELPHIA.

In 1847 Semmelweis began his brilliant and masterly pioneer work, which culminated in his rescuing from hopeless chaos the true explanation of the ætiology of puerperal fever. It is his peculiar merit to have solved this problem, which had baffled the skill and penetration of earnest men for centuries. Many facts had until that time been collected, and many observations had been made which apparently but served to entangle the vexing question in exasperating confusion. It is certainly instructive to study the state of medical opinion just prior to the time of Semmelweis concerning the cause of puerperal infection, and the story of his elucidation of this vital subject must ever have a fascinating interest for every sober-minded student of medicine.

But since the labors of Semmelweis have thus clearly placed the ætiology of puerperal infection on that elevated plane of truth which the searching light of bacteriology has but illuminated, the fact becomes at times evident that puerperal infection has not yet been eradicated from the dangers which surround women when they perform the highest function of their physical life, that of reproduction. As an immediate and direct result of his discoveries, the mortality from puerperal infection was at once reduced from at least 11 per cent. to 1.27 per cent., and since then this diminished mortality rate has been further decreased, so that at the present time a maternity would not be considered as above suspicion which could only show a percentage of mortality of anything over 0.25 per cent.

It is a matter of observation that at times women sicken and die from infection, and the cause is not immediately apparent. Besides these fatal cases of infection there are a number of cases of disturbed puerperium which, while not fatal, are yet attended by a varying amount of danger. Physicians have,

therefore, attempted to obtain a satisfactory solution for this fact, and a number have entered the lists in defence of auto-infection.

It is a most important matter for every one to have as clear a comprehension of this doctrine of auto-infection relating to obstetric practice as it is possible from the nature of the subject to obtain; it is also a matter of moment to have rest upon some reliable foundation whatever views may be entertained. Occasionally it becomes apparent in certain quarters that this is not the case, and the thought of auto-infection passes glibly from the lips without an adequate conception, apparently, of the tremendous mass of available evidence which is in contradiction to that idea. Not to be correctly informed in regard to this important subject is capable of working an unknown amount of harm directly commensurate with the amount of influence possessed by those who speak of the subject at all. If the idea of auto-infection in anything like a material number of instances be permitted to prevail, the tendency will be distinctly retrograde, and the occasion will be but required to furnish the old-time experiences of so-called "epidemics of puerperal infection." In addition to the bad effect upon the future practice of medical students and nurses from uncertain information received during the time of their novitiate, there remains the evil effect which this idea will exert upon the course of an investigation to find the actual origin of an infection in a given case. This is in many instances an exceedingly difficult task to perform, and then it would be so easy and so quieting to the disturbed conscience to say "auto-infection;" but obstetric science would not be thereby advanced, and obstetric practice would be distinctly injured. While theoretically we may possibly acknowledge auto-infection, even though it occur so rarely as to reach the vanishing point, as it does, it must be denied in practice; therefore it will be better to err in saying that it never takes place than in any instance to foster a recourse for refuge in an idea which is highly problematic, and as yet unproven. I am induced to take up this question in order to supplement, and possibly to complete, my former

efforts on this general topic, both before this Society and elsewhere.*

Definition.—Semmelweis said: "The decomposed animal organic matter which, being resorbed, induces puerperal fever, is in rare cases not introduced from without, but originates within the boundaries of the affected individual, thereby that organic matters which should be discharged during the puerperium undergo a decomposition before their discharge, and then, if absorbed, induce puerperal fever from self-infection."

Ahlfeld has become the main exponent of auto-infection, and at first charged the cavity of the uterus with being the breeding-place of the poisonous material. More recently he ascribes the cause to the micro-organisms of the air aspirated into the uterus, which effect a decomposition of the decidua, blood-clots, lochia, fragments of membranes, or placental remains; from resorption fever follows; from moistening of the wounds with decomposed lochia there results a secondary infection in the vagina and in the introitus. In more recent times Ahlfeld has indicated the manner in which micro-organisms obtain access to the genital canal to be by means of cohabitation shortly before labor, defecation, and various manipulations which pregnant women make on their own genitalia. He has spoken of the micro-organisms adhering to the pubic hair, and to those upon an underlying sheet, but has been criticised for so doing.

The modern form of the teaching of Semmelweis, according to Fritsch, is that "childbed fever is caused by an inoculation of infectious matter or cocci, which, having entered a puerperal wound, causes putrefaction of the wound secretion, the formation of ptomains, and resorption fever."

Kaltenbach (*Centralblatt für Gynecologie*, 1889, 465) says that "only after the demonstration that the genital secretion of healthy women contains fission fungi was the correct grounds for understanding self-infection obtained. The scientific justification of the entire doctrine of self-infection stands or falls

* "The Present Status of Puerperal Infection," *Trans. Hom. Med. Soc. Penna.*, 1896; "Biographical Sketch of Semmelweis," *ibid.*, 1897; "How May the General Practitioner Conform to the Rules of Aseptic Midwifery?" *Hahnemannian Monthly*, xxxii., No. 8.

with the demonstration whether pathogenic germs are found in the genital organs of healthy women or not."

Doederlein speaks of auto-infection as the process by which fission fungi, already present before labor in the general secretion, attain to development.

Fehling (*Centralblatt für Gynecologie*, 1889, 465) urgently advises that the word "self-infection" be dropped, and rather to speak of direct or indirect infection, or of exogenic or endogenic infection.

Jewett (*Amer. Jr. Gyn. and Obs.*, Apr., 1896, 417) has defined it as "infection from bacterial organisms primarily present in the genital tract," and "as contra-distinguished from contact infection in which the causative agent is conveyed to the patient in the lying-in period." He says "the conception is unfortunate, since all infection is primarily from without. Ovarian abscess, pus-tubes, suppuration of the vulvo-vaginal glands, and other pus-producing diseases pre-existing in the pelvis, may be the source of puerperal fever; but the patient in such cases is already an infected patient, and the puerperal disorder is but the extension of the local septic process. . . . . With the exception of vaginitis, the occurrence of parturition and pelvic suppuration is rare. Even the disease-producing bacteria of the vagina are exotics. The term 'auto-infection,' therefore, if used at all, has no proper application in its etymological sense."

The subject of auto-infection is one not to be disposed of in a word. For that reason many painstaking investigations have been instituted with the intention of obtaining reliable information upon the question. From the nature of the subject it has become possible only recently to assume what appears to be an unassailable position in regard to the debated points.

The literature of this subject has lately attained vast proportions, so that it will not be possible, in the limited time at my disposal, to make anything approaching a satisfactory review of it. The solution of the question has been attempted from two different standpoints, namely, that of clinical observation and that of exact bacteriological research. The labors which have been performed in the interest of this subject are highly creditable to all who have engaged in them, for by both methods

there has been required a diligent application which must command the respect of all who can in any measure appreciate them.

From a clinical standpoint many almost exhaustive works are at our disposal. I select for hasty review one which happens to be at hand. It is by Dr. Dionys von Szabo, from the Obstetric and Gynæcological Clinic of the University of Budapest, in charge of Prof. v. Kezmarszky (*Arch. f. Gyn.*, Bd. 36, h. 1, 77). It was at this clinic that Semmelweis labored after his return to the home of his childhood; and in this article Kezmarszky is found superintending this investigation which is to further perfect the labors of his illustrious predecessor in the chair.

Von Szabo has made use of clinical material amounting to 8716 cases of labor. These have been recorded with accuracy, so that much information obtainable from these records has a special value on account of being based upon so large a series. With reference to auto-infection, he says we may see what is taught by statistics, by the observation of childbeds with elevated temperatures, and from labors occurring without examination.

Statistics.—From these the following facts appear: The constant diminution of sickness since the introduction of antiseptics; the variation of the illness according to the persons making the examinations; the variations during the course of the same year; the occurrence of sickness in the puerperium in groups; the variations according to the number of births in twenty-four hours; the smallest number of cases of sickness that have occurred since the use of corrosive sublimate.

In regard to the first proposition that puerperal illness constantly diminished since the introduction of antisepsis, a table is furnished of 8716 cases of labor occurring from 1874 to 1887. These years are divided into three periods. During the first period the cases were treated in the old hospital under somewhat unfavorable hygienic surroundings: 55 per cent. were afebrile; the mortality from sepsis was 1.24 per cent. In the second period, with improved antisepsis and better hygienic conditions in the new hospital, 71 per cent. were afebrile, and the deaths from sepsis amounted to 1.60 per cent. In the third period

sublimate was used and the antiseptic rules were rigidly enforced, with the result that 80 per cent. were afebrile, the mortality being 0.27 per cent. Von Szabo, therefore, points out that since there has been an improvement of 25 per cent. in the febrile cases in consequence of the more rigid application of antisepsis, the main source of infection must have come from without.

A further source of infection is indicated to exist in cases of protracted labor, where attempts at delivery, or at least examinations, have been made before the patients have come into the clinic. Here again, as Fehling has pointed out, the great variation in the number of febrile puerpera cannot be explained by auto-infection, since in some clinics there are 40 per cent., and in others only 1 per cent. or 2 per cent., where pathogenic germs are found in the genital tract. Again, the variations in different years, amounting to 25 or 30 per cent., is altogether too large when we consider that the patients come from the same social strata. There is nothing which establishes the assumption that the great variations in the illnesses were in former years due to infection from without, while the 16 or 17 per cent. of the later years were due to the germs in the birth-canal.

There is a variation of puerperal illness according to the persons making the examinations, and von Szabo recalls the observation which caused Semmelweis such anxious thought, that in the clinics devoted to the instruction of medical students there was always a greater percentage of mortality than in that where midwives were taught. The same observation is made from statistics given by Ahlfeld, and again verified from those collected by von Szabo. These cases also reveal the interesting fact that while the number of cases having a single rise of temperature are more frequent in those treated by student midwives, yet the number of cases which have repeated elevations of temperature and the number of cases of sepsis are greater in those patients who were examined and treated by medical students. He reasons that while it is comprehensible why medical students cause illness in women twice as often as do midwives in training, due to engagements in gynæcological clinics and other institutions, yet it cannot be accepted that cases of auto-infection take

place twice as often when students examine as when women are in charge. It is also pointed out that there are midwives and certain physicians who, curiously enough, have frequent opportunities of seeing cases of auto-infection, while others have almost none but patients with normal puerperium.

As illustrating the fluctuations of illness during the same year, Table VI. exhibits the influence of students in raising the febrile percentage, and also the difference while the clinic is comparatively clean, after the disinfection, during the vacation, and at the end of the term, when many cases have been treated. The percentages here vary from 6 per cent. to 15 per cent. at different times.

The observations repeatedly made many years ago are again substantiated in that severe illness in the puerperium occurs in groups, and may often be traced to certain offending persons; even slight disturbances are excited in succession, and in those delivered on the same day. Fifty-four per cent. of the cases sickened in groups, and this high percentage leads to the belief that the same evil influences were active. It would not be correct to ascribe these to auto-infection, and it is very improbable that patients coming from widely-separated portions of the city foster pathogenic germs; it is too hypothetical that the vagina of each of these contain germs of attenuated virulence which in groups would have their virulence restored by identical conditions of the clinic.

In Table VII. are collected the cases delivered in twenty-four hours. It shows that when but one patient is delivered during this time, the results are very satisfactory, and form an exception in the series. The number of normal cases diminishes when more than six are delivered in twenty-four hours, probably because the care in disinfection is less, those engaged being so hurried.

Favorable results have especially attended the introduction of bichlorid as the antiseptic, and the number of sick puerperæ greatly diminished. This being true, it can only depend upon the prevention of infection from without. The germs of the vagina have not been destroyed for their cases are not douched, but it has been sought to prevent their introduction from with-

out, or possibly to prevent the infection by germs adhering to the external genitalia.

In studying the puerperal periods with elevated temperature, it becomes apparent that these have occurred in this clinic when there were wounds of the external genitalia, retention of ovular remains, and during the first day after delivery.

The most frequent cause of elevated temperature resides in the wounds of the external genitalia; through infection these bring about ulcers, transmission of the inflammation in the neighborhood, in the connective tissue, in the glands, and in the endometrium. The frequent illness of primiparæ is generally attributed to the more frequent and more severe lacerations of the birth-canal. Table IX. is formulated with reference to this question, and shows that there is an improvement of 15 per cent. in those who have sustained no laceration. It becomes evident that the nearer to the surface the genital tract is injured, the more frequent are illnesses in the puerperium; and yet the germs are said to originate from the genital canal, and not from without.

Semmelweis and others since his time have emphasized the importance of ovular remains retained in the uterus, in the ætiology of puerperal disease; as dead material, these furnish a favorable culture-medium for the development of micro-organisms. Kaltenbach explains that the wandering in of germs takes place in those cases in which the remains hang into the germ-containing vagina; when this is not the case, he thinks they may remain without danger. Szabo does not think this is a sufficient explanation, but that the after-pains aspirate fluid into the uterus from that which collects in the posterior *cul-de-sac*. After careful consideration of his statistics, he concludes that if we prevent the presence of germs in the discharges the retained membranes are extruded without an elevation of temperature. Sixty-six per cent. of his cases of retained membranes had a normal puerperium. But since he had a normal puerperium in 80 per cent. of cases, the danger from retained fragments cannot be denied. This peril he obviates by destroying the germs of the lochia by the vaginal douche at the first rise of temperature; if this is not sufficient, the membranous

fragments are removed. Decidual remains and their attached coagula, because of their more easy decomposition, appear to endanger more than do portions of the chorion and amnion.

It has often been thought that if a series of patients were to be observed whose labors would be allowed to progress without any internal examination, the subject of auto-infection would be cleared up. Ahlfeld treated fifteen cases in this manner, and had 60 per cent. illness. Along the same lines von Szabo gives a comprehensive table of sixty-two women who were delivered in the street. Fifty-four of these were not in any way touched; and of these, 79 per cent. had a normal puerperal period, 5 per cent. had one rise, and 14 per cent. had several elevations above 38.2° centigrade. There is also given a table of thirty cases of precipitate labor in the maternity, in which similar percentages were obtained. It must be remembered that 80 per cent. of the cases in general were normal. Then of this table it is remarked that if the women examined in the clinic in whom there is no endeavor made to avoid self-infection, and who are, besides, exposed to infection from without, become sick more seldom or not more frequently than those patients who, not being examined, are only subjected to self-infection, then it is absolutely impossible that self-infection is the only cause of illness.

Another interesting fact which must be mentioned is the question respecting the puerperal period of women who are previously affected by gonorrhœa, but which cannot at present be pursued further than to refer to 95 cases observed by Kroner (*Cent. f. Gyn.*, 1888, 155), of whom only 15 had any disturbance in the puerperium; from this the conclusion is drawn that it is very questionable whether gonorrhœa frequently exerts an evil influence upon the puerperium. The puerperium of cases with children who had ophthalmia, von Szabo has noted, was not materially worse than that of patients in general during the corresponding time in the clinic. In regard to peri- and parametric exudate, von Szabo had 76 cases with purulent leucorrhœa, in many of whom condylomata and scars from former buboes were present; 67 per cent. had a normal puerperium. Still he has noted that the results are less favor-

able with an active gonorrhœa in the mother. Inflammations often become acute from trauma in gonorrhœal diseases of the adnexa. This circumstance, however, is not identical with the conception of a puerperal disease in consequence of self-infection; we can say, at most, that the labor and puerperium of a gonorrhœal woman give rise to renewed gonorrhœal inflammation. It may be here remarked, also, that he had 25 cases of syphilis, in 52 per cent. of which the puerperium was normal. In thus hastily reviewing this article it has been necessary to omit even the briefest mention of many remarkably interesting points which have been demonstrated.

While the entire subject of auto-infection has remained in a measure quiescent for some years, the question has recently been again opened by Hofmeier (*Berlin klin. Wochenschr.*, 1898, No. 46), who defends the preliminary vaginal douche, which is the logical, practical consequence of a belief in auto-infection. This fact has inspired Dr. Eugene Peiser (*Arch. f. Gyn*, lviii., 248) to report 2722 labors from the Maternity Hospital at Manheim, under Prof. Mermann. Briefly stated, the patients here are treated with careful asepsis only, there is painstaking subjective antisepsis according to Furbringer, and the patients are usually examined, but not douched. Of the series of 2722 cases reported, 227 are counted out as not being suitable for the present consideration, being cases of Cæsarean section, cases examined or infected outside of the hospital, etc., so that 2485 cases remain. These are divided into three series. The first contains 1159 cases, which were examined by the regularly appointed midwife, or by the physician in charge, and of these, 3.1 per cent. had infection from without; 8 cases, or 0.69 per cent., had putrid infection from macerated fœtus, retention of membranes or placenta; 2 cases, = 0.7 per cent., had pathogenic foci from exudates, pyosalpinx, abscess of the vulvovaginal glands, etc. These ten cases are therefore ascribed to self-infection, according to the idea of Semmelweis. The second series, comprising 1239 cases, were examined by a midwife in training who is changed every six months. Infection from without was traced in 7.2 per cent.; 3 cases had putrid infection as above described, = 0.24 per cent.; 2 cases, = 0.16

per cent., had pathogenic foci. The third series contains 87 cases, and these were treated by the author and a midwife. The most exact subjective antisepsis was used. Infection was traced in 1.14 per cent.; 2 cases, = 2.29 per cent., had putrid intoxication, and no case had pathogenic foci.

From this it will be seen that in a series of 2485 cases there were 17 which may be attributed to self-infection according to the original idea, equalling 0.68 per cent. Analyzing this number, we find 13 cases, =0.52 per cent., had putrid intoxication, and 4 cases had pathogenic foci as above indicated, = 0.16 per cent.; so that in this series, examined with exactness, there were but 68 cases in every 10,000 to which the term self-infection could in any sense be applied. It will probably require very little argument, and perhaps it will be necessary simply to call attention to the preponderating probability that 52 of these 68 cases in 10,000 were infected from without, when, with this presumption in mind, it is considered that in them there was present either dead fœtus with fever already before labor, or retention of ovular remains. Think how many opportunities for infection from without must have attended these cases! And so, if we look at the next figures, there were relatively 16 cases in 10,000 which had exudates in the pelvis, pyosalpinx, or abscesses about the vulva. Of these, it would probably be more correct to say they had an extension of an already existing disease. Now, in the light of all the circumstances which it has been possible to examine judicially, with reference to the question of auto-infection, would it not therefore be correct to say that here is a series of 2722 cases, some of which were complicated obstetric cases; a certain proportion of them had intercurrent diseases during parturition or the puerperium; approximately 5 per cent. had infection from without which it was possible to trace; and 0.52 per cent. had infection from without which it was *not* possible to trace?

We have now seen, from an examination of about 11,500 cases which have been collected and accurately tabulated for the demonstration of a number of important questions relating to the exact conditions of the female genitalia, especially with reference to auto-infection and the necessity for the vaginal

douche, that the outcome is that auto-infection may only be acknowledged to occur with a rarity that is very near, indeed, to the vanishing point.

Let us now see to what result we will be conducted from an altogether different point of view, and from totally different methods of investigation. Since bacteriology has come to the aid of medicine, it has been invoked to lend its aid to the solution of some of the great questions of obstetrics and gynæcology. The exact bacterial condition of the vagina, both in the pregnant and non-pregnant state, has been studied in an astonishingly laborious manner. This obtains its importance because, as has been shown above, the original conception of self-infection has sustained a certain modification since its original promulgation; and in addition, as has been shown, a more accurate conception of the subject would be attained if cases suffering from a disease due to an infection from without, as, for instance, gonorrhœa or suppurative conditions in the pelvis, were not referred to as auto-infection, but were regarded as simply extension of a pre-existing infection. This is certainly a more accurate pathological concept. The phase of the subject, then, remaining for debate involves the exact bacterial condition of the vagina. The streptococcus pyogenes has been shown to cause the severe infections, and from it most danger is to be apprehended; therefore experiments are always directed toward determining its presence or absence in the series examined. Earlier bacterial examinations have furnished results which were often sadly contradictory, and it is but recently that we may hope to have reached tenable ground. This is, perhaps, true with reference to the practical subject of auto-infection, though it is probable that other portions of the general subject of the vaginal secretion must be further investigated.

Renewed interest was awakened by Gonner (*Centralblatt für Gynecologie*, 1887, 444), who treated the subject according to modern bacteriological methods, although others before him had, for instance, studied the parasites of the female genitalia, and the action of the lochia when injected into the tissues of animals. Semmelweis also endeavored to confirm his discoveries concerning infection by animal experiments. Gonner prefaces

his article by saying that Ahlfeld had stated that self-infection plays a greater *rôle* than is usually ascribed to it; practically, therefore, it was necessary not only to use subjective asepsis, but also to have regard to the disinfection of the person of the parturient. This incited Gonner to examine the genital secretion of pregnant women, to determine whether pathogenic germs were present which were likely to cause diseases of the puerperium. For this purpose he examined thirty-one cases of pregnant women who were mostly in the last stage of pregnancy. As a final result he came to the conclusion that there are no pathogenic germs in the cervical and vaginal secretion, and self-infection in the sense of Ahlfeld is not to be expected.

Shortly thereafter Doederlein found that the lochia in the uterus was sterile, but when taken from the vagina it contained micro-organisms in 75 per cent., and streptococci and staphylococci were also present. At the same time von Ott and Czerniewski (*Cent. f. Gyn.*, 1888, No. 50) also showed that the uterus is sterile, but von Ott was not able to further confirm Doederlein. Since then great interest has been awakened, but the results have varied considerably. I have made abstracts of a considerable number of reports of these experiments which it was my intention to insert in this place; but in order to keep this paper within the prescribed limits, only some bare results will be mentioned in the briefest possible manner, as Williams (*Amer. Jr. Obs.*, 1898, xxxviii., 809) has summarized them. Streptococci were found by the following in percentages varying from 4 to 27 per cent.: Burkhardt, Steffeck, Doederlein, Burguburu, Vahle, Witte, Kottmann, Winter, Williams in 1893, and Walthard. On the other hand, since the experiments of Gonner above mentioned, von Ott, Czerniewski, Thomen, Samschin, Kronig, Menge, Bumm, Williams in 1898, and recently Gonner, again, have shown that the vaginal secretion does not contain virulent streptococci.

It is unfortunate that the laborious work required by these bacteriological examinations has produced contrary results, especially since the clinical observations given above, and as obtained from numerous others, which cannot even be mentioned, have not been confirmed from every bacteriological examina-

tion, as is so greatly desirable. The methods employed in the bacteriological examinations have therefore been again scrutinized with a view to further developing them, and to discover possible errors in technique. In this connection Kronig (*Cent. f. Gyn.*, 1894, 4) has pointed out the important fact that most of those who had found pathogenic germs in the vaginal secretion had frequently demonstrated the staphylococcus albus and aureus, and only rarely the streptococcus pyogenes. *Per contra*, the lochia from the severer cases of puerperal fever "usually contained the streptococcus, and only in the rarest cases was present the staphylococcus aureus, never the albus. If it is assumed that the germs of the vaginal secretion may infect the uterine cavity during labor and the puerperium, the bacterial findings do not well correspond. Above all, the frequent occurrence of the staphylococcus albus must awaken doubt. Since it is just the albus that is found so very frequently upon the skin, the possibility is presented that this germ is first introduced into the vagina during the manipulations attending the removal of the vaginal secretion for examination." Heretofore the secretion has been obtained by means of a sterilized speculum, which of necessity must come into contact with the vulva, and thus carry in germs not before present in the vagina. Kronig used a sterilized glass tube of small diameter, so that the margin of the hymen could be passed without contact.

Williams became interested in this matter, and at once set about to repeat his work of 1893. He at first used the tube of Kronig, and then the apparatus devised by Menge, which consists of a metal tube 5 millimeters in diameter, fenestrated at the side of the closed end, and having within it another tube slipping in such a way that the fenestra may be closed, thereby permitting the withdrawal in its original state of any secretion scraped from the upper vagina, after the tube had been introduced high up, without contact below. When the secretion obtained with these precautions was examined, Williams obtained results very different in 1898 from those made in 1893. He examined 92 cases (*Am. Jr. Gyn.*, xxxviii., 807), and in none of them was he able to demonstrate streptococci, and in only 3 was the staphylococcus epidermidis albus present. He

then examines the methods employed by former investigators who obtained positive results, and shows that all of them used specula or large glass tubes, which were likely to carry into the vagina the germs not originally resident there, and thus all subsequent results were vitiated. This would explain the discrepancies which have interfered with bacterial examinations confirming clinical observations.

In conclusion, we may say that genital auto-infection is not sustained either by clinical observation or by bacterial research, and all suggestions of auto-infection tending to undermine the results obtainable by careful asepsis and subjective antisepsis should be steadfastly opposed.

DISCUSSION.

Dr. W. J. Martin: This is a matter of very great importance to every man who practices medicine and who attends cases of confinement. My own personal experience in a case briefly stated is that I, a few years ago, attended a case of confinement, and afterwards the patient had a very severe attack of puerpural peritonitis, or what used to be called child-bed fever. It was a very protracted illness in which she had numerous pelvic abscesses, and she was invalided for a long while. Several years after that, suit was brought against me for malpractice for ten thousand dollars, and judgment was rendered against me. The literature of to-day is against any doctor who has a case of confinement going bad on his hands. He is culpable, and he is held liable by the law. They say to us that all these cases are infected from without, and if the doctor understands his business, and does it in a proper, judicious way, no such cases should ever happen at all. And that is where we stand now.

As regards the management of labor, the doctor says that since the use of bichloride the number of afebrile cases after parturition has increased. I would like to ask, for my own information, whether there were any ante-partum bichloride douches used?

Dr. Gramm: None whatever.

Dr. W. J. Martin: Some teachers and books tell you about

how you should douche the vaginal tract when labor pains commence, and recently a professor of obstetrics and gynæcology tells you that the investigations on that line, of a most recent date, have led to the conclusion that, as Dr. Gramm says, there are no septic germs of any kind in the normal secretions of the genital tract before and during labor. That is the consensus of opinion as I understand it; and, furthermore, we have found out, by repeated tests and experiments, that of all germicidal solutions and preparations known, none equal in reliability and promptness the normal secretions found in the genital tract after confinement. They are germ-destroyers, and, of course, life-protectors, and what a horribly bad thing it is to wash them away. The best plan is to use no ante-partum douche in healthy cases. This is one of the most interesting things that we can consider at this point; the books and authority show that all infection is from without.

Dr. R. E. Tomlin: I would like to say, in connection with the remarks of Dr. Martin, that in my few cases of consultation in obstetric practice I personally have carefully observed the precautions that Dr. Gramm has outlined. In each case I recall—and they number several or more—the other doctor in no case took any precaution, with the result that in each case there was a septic infection at the time, and—while some cases were mine, others were in consultation with the other doctors—I felt it keenly. I feel that the statements in this paper are absolutely true and should be considered; and I also feel that the weight is overwhelmingly against the man who won't use these things when there is likely to be some difficulty, such as Dr. Martin had, and those doing a large consulting practice should speak more plainly to the men who will not use these methods.

Dr. B. W. James: I think sanitary science has advanced so far at the present time, and the matter of antisepsis has been so perfected, that it is quite requisite for a man to be up-to-date. Even if it is not requisite, public opinion frames the responsibility for the physician, and the attorneys and public opinion can very easily say, as we have here heard, that others do that, and it is a common custom, and you are liable to damages.

Dr. C. S. Middleton: I had a case a few years ago which was supposed to be puerperal, and I could not divine the cause, although I must say she had had a slight operation, and which, of course, during the fever, was very much interrupted in its progress. However, she made a good recovery.

I had no difficulty as did our friend, Dr. Martin. But some time afterwards, while attending the nurse who waited on this patient in her last illness of consumption, she said to me: "Doctor, I want to make a confession to you. I think it was I who infected that case for you. They had some puerperal cases in the hospital which I had been attending, and they sent me to your case without, I think, taking good care. I had been attending these cases in the hospital, and I think the case was an infection of yours." I venture that oftentimes the doctor gets blamed when the nurse is the one who should be blamed.

Dr. D. C. Kline: The doctor speaks of the nurse oftentimes infecting a case. I believe we can go farther than that; that the patient oftentimes infects herself, making an examination of the perineum herself. I think we would be astonished to find how many of our patients, after a confinement, examine themselves to see whether there has been any damage done, whether they are in the same condition that they were prior to the confinement. I do not believe, as a rule, that there is likelihood of auto-infection, so-called. If that were the case we would have a large number of septic cases in confinements, for we recognize the fact that a large number of obstetrical cases are infected with gonococci, but do not become septic. Oftentimes, again, I believe the infection is carried, not perhaps from the physician or from the nurse, but may be all carried from the labia of the patient. I believe the time is not far off when we will see the patients prepared and the parts shaved; the labia will be washed with some disinfecting solution, and thoroughly cleansed.

I believe oftentimes, again, that when we have a septic condition, rise of temperature, perhaps, and evening chill following soon after labor, it is simply the shock from the labor to our nervous patients. A physician may have a shock following that of the patient, from the fact that she may take a chill and

have a rise of temperature perhaps of several degrees. Of course, in a few hours' time, if it appears only to be shock, the temperature will subside.

Dr. T. J. Gramm: If no one else wishes to discuss the paper, I have the privilege of closing. I am very glad Dr. Martin brought up that suggestion of his, and if I do not expose myself to having pointed out to me that hindsight is better than foresight, I would like to ask for some of the results of practice, how a suit could have gone against a man under such circumstances; as a fact, the matter is that there is an immense amount of defense possible to be made by a man under such circumstances. Now, in the first place, we have not yet a means for completely disinfecting our hands—contrary to what we all believe. There is not a method to-day that can be demonstrated with absolute accuracy to be capable of perfectly sterilizing our hands. I would like to enlarge on that, but I do not want to take up the time. These facts, if you will look up the subject, these very facts were brought out in one of the German Societies, where this point was under discussion, that until we have a means of absolutely sterilizing our hands, we are not open to a lawsuit.

The other point that I want to make is that we are talking and lending a little influence against apparent antisepsis, simply going through the motion of the thing, dipping our hands into the water and thinking they are sterilized. As I used to say, when speaking of the subject of antisepsis didactically, it is not at all a religious rite; not a question of putting a few drops of water on your hands and thinking they are clean, but chemical changes must take place before the hands are sterilized. As Dr. Kline has pointed out, the attendant herself very often infects. We are talking and we are trying to influence the profession against simply going through the motion of antisepsis. I am pointing out to you, I want to influence you here as much as I can to believe that all of the responsibility is on yourself, because it has been until quite lately very commonly debated whether a physician was ever infected.

Dr. Eliza Lang McClure: In the Woman's Southern Homœopathic Hospital for a number of years I have had a bottle of

syphilinum. I had that bottle for years. When the Hospital was opened, I said, "Here is a class of women who, if there is such a class anywhere, will be the subjects for the proving of this remedy." I have not found any proving of syphilinum that is worth the paper it is printed on, except one symptom, and that is amelioration at dawn of day. They suffer all night, but as soon as the dawn starts there is amelioration. I carried an ounce vial of this (one hundred thousandth), and the first case that came in was a large colored woman with an awful discharge. The whole of the labium was plastered with a greenish, nasty, sticky mass, about the consistency of the white of egg, a dirty green. Her story was straight, but there is evidence that she was not straight. I said, "We will try syphilinum." I give you my word, she had three doses—one each morning. She had sac. lac. powders during the day. On the fourth day she returned with a clean discharge. That experience was repeated hundreds of times. So I ask you all to please bear that in mind and try it. It was the nastiest, vilest, dirtiest looking discharge I ever put my eyes on, but that will clean it up in four days. I ask you all to try it. That is my experience.

PELVIC HÆMATOCELE.

JOSEPH HANCOCK, M.D., PHILADELPHIA.

THIS is a very important morbid change we, as physicians, have to combat, and one which we know so little about until we have a case or two to treat, so if I can but bring out a discussion from you as physicians on this subject, I will be paid for my labor in bringing the subject before you. There may be a bleeding, and often is, into the peritoneal cavity, among the delicate and intricate machinery of woman, to such an amount as to threaten life, and even cause death, and then there may be bleeding into this region which does not threaten life by its amount. In the majority of these latter bleeding cases the physician's attention is drawn to the case because of

the pain and the lump which has been formed by the clotting of the blood. These lumps are what I wish to call your attention to—pelvic hæmatoceles, or lumps of clotted blood in the pelvic cavity, or belly.

The assertion has been made by men of learning and experience that pelvic hæmatocele is nothing more or less than a symptom of a disease—not a disease. This is, I think, an error. It certainly is more than a mere symptom; it is a morbid change which produces symptoms of its own. It may be true that it is not a primary morbid change, but it is an effect secondary to other changes, and the primary changes may be, and often are, different in different cases. But a hœmorrhage within the belly is none the less a distinct and morbid change.

To have a *pelvic hæmatocele* we must have the blood to clot. Now, we may have a bleeding into the pelvic cavity in which the blood which flows is menstrual blood, this blood being prevented from flowing through its natural canal by an atresia of the passage. This blood is not apt to clot; it does not form a lump. It is dead blood, so to speak, and when the saprophytes come in contact with it they find a very fertile soil for their multiplication; as I said before, it does not form a lump, but it often causes fatal peritonitis. These cases are different from where the living blood flows out and clots. They are like them in that the blood is effused, but in no other way. These cases are not the subject of my paper; they are not pelvic hæmatocele, because there is no lump or clot. I might mention that lumps made by clotted blood have been called by different names. Internal bleeding from the vessels of the female genitals may be in one of three places:

1. Into the peritonæum.

2. Into the cellular tissue under the peritonæum, but above the deep pelvic fascia.

3. Into the cellular tissue below the pelvic fascia. When swellings made of clotted blood in the pelvis above the deep pelvic fascia were first recognized chemically, they were called hæmatoceles. Those who first invented this term applied it to bleeding either (first) above or (second) below the peritonæum.

The chemical differences between these two kinds of hæmatoceles, the (first) intraperitoneal and the (second) extraperitoneal, have only of late been pointed out. Effusions of blood below the deep pelvic fascia extend down into the vulva, and have long been known as hæmatomata. I propose to call hæmatocele a hæmorrhage into the peritonæum, and call hæmorrhage into the connection tissue hæmatoma.

Intraperitoneal (hæmatocele) means a lump formed of clotted blood in the pelvic part of the peritoneal cavity. Its causes are:

1. Tubal pregnancy.
2. Tubal mole.
3. Disease of ovary.
4. Reflex from uterus, or bleeding from inflamed or congested tubes, might be termed metrorrhagic hæmatocele.
5. Acute diseases.
6. Perimetritis.

Small intraperitoneal hæmatoceles are generally due to tubal pregnancy. Apart from this, they are either accidents of other diseases more important than hæmatocele, or they are secondary to rare morbid conditions, which cannot be diagnosed.

Symptoms and Signs.—The small lumps of clot in the pelvic perineum, which we call hæmatoceles, cause pain. The pain comes on suddenly with a faintness and pallor, but the pallor is not well marked, so that a physician would not know or suspect the cause unless he had previously seen the patient, before the bleeding took place. Nor is the weakness and faintness always severe enough to cause the sufferer to send for a physician. The pain usually gets worse, and then the doctor is called. The pain is low down in the belly, and, like most pelvic pains due to bilateral lesions, is worse on the left side. If a doctor were called at once, he would find no clot or lump. He would find no physical signs, for the lump cannot be felt until after the blood has had time to clot—not before. The blood first lies around the Fallopian tube, from which it came, and then trickles down into Douglas' *cul-de-sac.* Therefore the lump is found behind the uterus—usually to one side of the organ. If the clot should be an extra large one, it might affect the posi-

tion of the uterus; but this is not very likely, as the uterus would affect the clot more than the clot would the uterus; but I have found there is considerable rectal tenesmus, owing, no doubt, to the pressure of the clot while it lies in Douglas' pouch. There is quite often some catarrh of the rectal mucous membrane. We have to distinguish between an ordinary inflammatory condition, or of a lump formed by inflammation of the peritonæum around the ovary and tube, and a clot or hæmatocele. One of the best ways to distinguish is to note how the illness came on—which one can generally learn from the patient or some of her friends. Instead of having shivering, and feverish symptoms and pains afterward developing, the blood-tumor or hæmatocele comes on with sudden pain, faintness, pallor, and without fever. It is difficult—sometimes impossible—to distinguish a small effusion of blood around the end of a Fallopian tube from an effusion into the tube (hæmatosalpinx). In the present state of our knowledge the diagnosis is not so important, for the principles of treatment apply in either case; but we should be careful in our diagnosis between intra- and extraperitoneal hæmatocele, because the clinical differences are great.

Prognosis.—The prognosis of hæmatocele of either variety is uncertain and should be given in a guarded manner. It depends much upon the cause of the bleeding; many cases of both varieties end in perfect recovery by gradual disappearance of the lump without bad symptoms, while in cases of intraperitoneal hæmatocele, where there is frequent bleeding, the symptoms are more severe, and may end in death unless our treatment is positive and to the point. There is extraperitoneal hæmatocele or bleeding into the cellular tissue beneath the peritonæum, but above the deep fascia. This, like the peritoneal variety, is more often the result of extra-uterine pregnancy than anything else. In this variety, also, the uneventful absorption of blood is far from certain. Hæmorrhage, if there be tubal pregnancy, or hæmorrhage and inflammation, if there is bleeding into the peritoneal cavity, are sure to give trouble, and always need careful watching, and often they need prompt operation.

Treatment.—There are two methods:

1. Expectant: leaving the case to nature and our remedies.

2. Operation: removing the blood and the diseased ovary or tube whence the blood came.

The first, or expectant, is the best line to follow, unless there are very serious symptoms attached to the case. An operation on the peritonæum involves so much suffering, mental and physical, and so many sacrifices on the part of the patient, to say nothing of the immediate and remote dangers, that it is far better for the patient to get well without an operation, if possible. If recovery is not going on well, there will be renewed bleeding or inflammation. In either case the new symptoms show that the cause of the bleeding was not a condition which was temporary, and is past, but one still active. If so, then I would deem an operation necessary, and remove the diseased part; or, in other words, do not operate merely because there is a small clot in the peritoneal cavity; but if there is reason to think that the condition which caused the bleeding is still present, open up without delay. The expectant treatment should consist in keeping the patient in bed, and on a non-stimulating diet, so as to slow the circulation, to diminish the blood-pressure on the vessels as much as possible. Also keep the bowels in good condition. If you find the lump to be getting harder and smaller, and it becomes more irregular in its outline, you may consider your patient doing well. The treatment of extra-peritoneal hæmatocele is always expectant, as there is no immediate danger, and no immediate need for an operation. Watch the lump, and at intervals of a few days notice carefully whether it is getting larger or smaller. If gestation has been arrested, the clot will gradually be absorbed. As soon as you find the lump to be smaller and uneven, you may let your patient up and give her ordinary diet, and comfort her with the assurance that she is fast getting well. If gestation has not been arrested, and the fœtus is developing underneath the pelvic peritonæum, then—although the symptoms may seem to be better for a time—the lump will not get

smaller, but it will increase in size, and the case ceases to be a simple hæmatocele.

As to remedies for these cases, they must be chosen to coincide with the objective and subjective symptoms of each individual case. They must be chosen to control the blood-vessels, to avoid bowel irritation, and to aid absorption, as well as to keep up bodily strength.

DISCUSSION.

Dr. B. F. Betts: This is a very important subject for the general practitioner, and I am glad that the doctor has gone into it as fully as he has. The subject of hæmatocele is one for the general practitioner, because it generally attacks the individuals who have been in fairly good health and not under the specialist's care. Naturally she seeks the advice of her family physician under such circumstances. There is just one point that I overlooked in the doctor's paper. I cannot tell whether it referred to extra-uterine pregnancy or not, but it is on that particular point that I would like to speak. The thought always should be uppermost in the mind of the general practitioner, when he has a case of pelvic hæmatocele, that it is more than likely due to extra-uterine pregnancy, unless there is some pathological condition to account for it, such as, for instance, a cancerous condition, or a condition of the pelvic veins to lead to the suspicion of rupture without pregnancy, or such a condition of the arteries as I recently found, in which an aneurysm developed from imprudence in jumping from a carriage. The woman felt something hurt her and went home, three or four miles, without any very great additional discomfort, but the next day she felt very much indisposed. In two or three days after her physician had been attending her, a specialist was called, and quite a large accummulation was found in the broad ligament of the left side sub-peritoneally. There was at that time quite a marked temperature, and there was no history of injury given. The fact of her having injured herself in jumping from a carriage was mentioned afterwards; at that time it was not thought of. It was presumed that this accumulation was an abscess, and it was suggested that it should be evacuated. It was fluctuating; there was no

thrill; no evidence of an aneurysm or rupture of an artery, but upon the slightest puncture of her vagina into that mass, there was a most copious hæmorrhage and gush of blood as large as the puncture, as large as a goose-quill, and it persisted. Immediately I had iodoform gauze packed into the cavity, but the patient's condition was such as to lead to the supposition that internal hæmorrhage was going on. The abdomen had to be opened, and on either side of the uterus the bleeding into the peritoneal cavity was found to be very copious from diseased arteries. They had ruptured, and internal hæmorrhage was going on. That case, of course, required operative treatment from the standpoint of the specialist at that time, but if the condition had been recognized as one of hæmatocele, due to aneurysm, or rather that it was an aneurysm, not a true hæmatocele, no operative treatment would have been undertaken, but in a vast majority of cases we would be led to believe that we were dealing with extra-uterine gestation, and the first supposition, if a patient shows symptoms of internal hæmorrhage, is that we have to deal with extra-uterine pregnancy; it is not the province of the specialist or general practitioner to wait; those cases need operation. The life of the patient is in peril at all times, and the simplest case apparently may turn out to be the most serious one without any warning.

A patient of mine, in whom I was very much interested, moved to a western city a few years ago. I remember very distinctly the pleasure with which this woman alluded to the fact in writing me that she was pregnant. As she had been sterile a long time, she felt that she was to be congratulated because of the change of things. In passing down stairs with her husband, bidding him good morning as he departed to his place of business, in stepping from the last step to the floor of the hall, something hurt her in the pelvic region. She did not mention it, however; went into the parlor, sat down for a little while, while he passed on to his place of business, but in ten minutes she was so seriously ill that a physician had to be summoned, and in five or ten minutes after that she was a corpse. The case was diagnosed as one of bowel obstruction, and a certificate to that effect was given. The body was

brought to Philadelphia for interment; the features of the case were recited, and the suggestion was made that a post-mortem examination should be made with the idea of determining the cause of the trouble. The suggestion was made that we would very likely find extra-uterine pregnancy, and that we should find the peritoneal cavity with a large accumulation of blood. This request was not at first acceded to, when the undertaker said that in puncturing the body to preserve it a large quantity of blood was discharged through the opening. I told the family that that confirmed me in the belief that it was internal hæmorrhage due to extra-uterine pregnancy. The result of the post-mortem examination proved the supposition was true. That only went to confirm the belief that we ought all entertain that these cases of extra-uterine pregnancy are cases for operative treatment, and not for medical treatment or any delay whatever.

Dr. T. J. Gramm: I would like to say that this is a subject, like a number of others, upon which we should have very clear-cut ideas as to its pathology.

Now, the doctor, and text-books likewise, will name ectopic pregnancy, varicosis of the pampiniform plexus, new growths, torn adhesions, etc., and those who are not working in pathology will get the idea, when they get a case of hæmatocele, that they are to distinguish and spend a long time in trying to determine what the differential diagnosis is in the case, whereas it is unfortunately the fact that the pathology is far more simple than that, and these statements are made simply as a matter of teaching, and for the sake of having said or in order to present the question fully; then other causes of pelvic hæmatocele are named just as Dr. Betts has pointed out, but pelvic hæmatocele is either due to ectopic pregnancy, or, as a rule, it is tubal abortion. Now, then, in tubal abortion we have the same pathological processes going on from the tubal end into the abdominal cavity as we have taking place in the vagina from the cervix in a case of ordinary abortion. What are the circumstances that are likely to take place in a case of that kind? Is this a case where the hæmorrhage is constantly filling up that pelvis more and more and endangering the life of that woman?

Is that a case to try and sit down to find out what is the differential diagnosis?—or question whether it is blood, or, if it is blood, whether it comes from the vein or from one of the numerous causes of hæmorrhage?—just as Dr. Betts pointed out, while you are thinking that the woman is dead or dying. These cases we ought to have plain before our minds as cases of ectopic gestation and more often have been found to be tubal abortion. The treatment of them is just one thing—that is, abdominal section. Theoretically, of course, there are other causes than ectopic gestation for pelvic hæmatocele, tubal abortion, or rupture of the tube. Rupture of the tube may take place, and in this case the blood clots rapidly; not a few clots; it is not a small collection of blood, but something that fills up the pelvis, and the woman is bleeding into her own body; and that is the case I referred to in the Bureau of Surgery. That is the main thing that we want to emphasize. We ought to have our pathological ideas as simple as possible, in order to know what we should do as regards treatment. If that is ectopic pregnancy, we will know all those signs found in the text-books under that heading. There is a miss. or no miss., the menstrual period possibly keeping on; the possible morning sickness or none; some of those vague symptoms we are not sure of—then will come the rupture, the sudden pain, the symptoms of internal hæmorrhage and the collapse; there we have the signs of ectopic pregnancy, and likewise the sign of pelvic hæmatocele.

As regards the treatment, I very fully agree with the doctor that we are to consider treatment provisionally—that is, the expectant plan with a very great question-mark. I know one lady who lost her life because a noted surgeon in Washington allowed her to get dressed and prepare for a journey to Boston. She reached Philadelphia and died—the woman had an internal hæmorrhage. We ought to consider with a question-mark the expectant plan of treatment. The operative treatment is the one that has furnished the safest and best results, as far as good results are concerned. I cannot agree with the writer of the paper in saying that when the hæmorrhage is from the menstrual flow we find the blood will not clot. It will be

found that it clots if a long enough time be given it, because the same factors influence the blood in the pelvis as influence the clots of blood in the uterus and secretions of the uterus and vagina.

Dr. Joseph Hancock; I am glad that the paper brought out the discussion, because it is a disease that should be well taken up and understood. I do not think that we understand it well enough, and it often happens, if we look a little farther, that we will find a case in this long list of female diseases where a slight hæmorrhage is overlooked. We should be careful about this; it needs careful study and careful treatment. I have not had any experience of having the operation spoken of, but the members who have discussed the paper are men of experience, and they know what they are talking about, and I am inclined to believe that I may be wrong in waiting a while before operating.

ENDOMETRITIS.

PEARL STARR, M.D., BELLEVUE.

Edometritis, being one of the most common and one of the most stubborn diseases with which the gynæcologist has to contend, should for this reason receive a special and thorough investigation. Edometritis is an inflammation of the endometrium, or mucous surface of the uterus.

This inflammation may be acute or chronic, and in degree from a mere congestion to a high state of inflammation, involving the adjacent tissues and organs.

This acute form generally arises from severe colds checking or suppressing the menstruation, miscarriage or abortion, parturition, lacerations, traumatism, excessive venery. To gonorrhœa is attributed a large percentage of cases. "When an eruptive disease occurs about puberty it is apt to cause pelvic trouble. If you get hold of these cases early, while they are still growing, you can do much for them. After twenty-five or thirty they are, as a rule, incurable."—Prof. A. J. C. Skene, in *International Clinics*, 1895, p. 294.

The chronic form supervenes upon the acute form, or may develop gradually from a mere congestion, from cold, improper clothing, crowding the viscera down into the pelvis, impeding the circulation; constipation is frequently an exciting and aggravating cause. In the majority of cases I believe the foundation is laid in carelessness or neglect during early menstrual life. This carelessness or neglect is through the ignorance of the mothers and daughters in regard to this necessary physiological function of the female organization.

One of the earliest symptoms, even before pain proper is recognized, is a heavy, dragging sensation; sometimes this is only about the menstrual nisus. This is especially the condition in the milder cases. As the disease advances it is accompanied by dysmenorrhœa, or amenorrhœa; in the intervals the patient may feel pretty well. As the case still advances, if not relieved there sooner or later is a dragging sensation, aching of the back and limbs, accompanied by leucorrhœa. There is coldness of the feet if the disease continues. There is a depressed feeling, with tendency to cry, or in others an irritable condition.

The law of mucous surfaces being for inflammation to extend the whole length, the disease passes on to the Fallopian tubes and ovaries.

A diseased condition produces either an atrophy of the parts or a proliferation of cells, and thus a hypertrophy of the uterus. This increase in size and weight causes a dragging and weakness of the supports, hence displacements in the direction of the least resistance, downward, backward, or forward.

This diseased condition lays the foundation for other troubles; it forms the nidus for tumors—fibrous, polypoid, and malignant tumors and cysts.

Dr. Wood, in his paper read before the American Institute of Homœopathy, page 307 TRANSACTIONS, 1897, says:

"May not endometritic surface provide the nidus for micrococci, which is supposed by many to be the cause of cancer? Pathologists disclaim against the heredity of cancer; also against the contagion of cancer."

Also (on page 308). "It (cancer) attacks women otherwise

strong and well—that organ whose physiological resistance is diminished by local injury or *disease*, etc.; also, if we accept the theory that cancer is due to diminished physiological resistance, the logical conclusion is that the disturbance of the system which precedes death of tissue is purely functional. . . . My opinion is that cancer—especially cancer of the uterus—is to a very large extent a preventable disease. I believe that by correcting local lesions, and particularly lacerations, and by keeping the general bodily nutrition at par, a large number of deaths from uterine cancer would be prevented."

Dr. Bootby, in discussing Dr. Sander's paper, presented the same year (page 348), speaking of inflammation of the ovaries, says: "How came it that inflammation of the ovary would be an important point? *Because* we almost *never* have inflammation in the pelvis unless we have had inflammation lower down, which has extended upward. *It must have commenced* in the *uterus* or *in the vaginal* walls, and extends from there through the uterus and tubes to the ovary."

Dr. W. D. Foster, of Kansas City, Mo., says: "I believe that in many of these ovarian and tubal cases the original was in the uterus. Why not treat the uterus before removing the ovaries?"

Dr. H. E. Beebe, in his paper on menstruation, writes (Transactions Amer. Inst. Hom., 1897, p. 365): "Functional disturbances or the clinical importance of the menstrual wave is not sufficiently appreciated by the clinician, and I certainly believe not nearly as much as it will be in the near future. For it is a *symptom of disease*, and there are few functionating organs in the body not liable to be deranged by disturbance of this wave."

Farther he writes, on page 367: "The earnest student who investigates the question thoroughly from this point will confirm such conclusions, that a diseased uterus commonly has its monthly rhythm disturbed, and through it the rhythm of other organs is deranged—all of which impair the general vitality of the patient."

Dr. Paul F. Munde, in the *International Clinics*, fourth series, vol. ii., page 271: "We frequently meet with such cases in

which physical examination, and even one made with the speculum, does not reveal any reason for the profuse menstrual flow. Under these circumstances, the only thing left to do is to look for vegetations. These vegetations are *usually* the result of chronic endometritis—that is, a hyperplasia of the normal glands of the mucous membrane in consequence of chronic congestion. Many cases of powerless labor are due to this diseased condition of the endometrium, and through it the muscular portion becomes unfitted to perform its work. Much of the nausea and vomiting of pregnancy would be prevented if the uterus were relieved of disease before gestation took place. Endometritis unfits the uterus to perform the functions required of it. Sterility is a frequent sequel of this disease. It is often the origin of dysuria and pruritus, caused by the acrid excoriating leucorrhœa resulting from this disease. An adherent placenta may be traced to an endometritic uterus. Every physician is aware of the profound impression diseases of the pelvis produce upon the nervous system. If the disease is recognized and treated early, tissue changes will be prevented. Treatment should be hygienic, medical, electrical and surgical. No physician or gynæcologist can hope to cure or benefit a case unless the patient observe simple hygienic laws. One prolific cause of this disease is the improper care of the feet. Girls go out in all kinds of weather with thin shoes and no overshoes, get their feet wet, and sit through the session of school in this condition, or stand in a store or an office. The majority of women and girls do not know what it is to have warm feet. Many stand in stores and overheated, illy-ventilated offices, then go out into the cold with insufficient wraps. They attend entertainments in light clothing, are in heated rooms, then go out into the chill night air. They dance in heated rooms till the wee sma' hours, then drink ice-water or take ice-cream at all times, regardless of their physical condition; the result is, as a matter of course, disease. The physician is usually not consulted until the patient has reached that stage she feels she can stand it no longer. If these cases come under treatment early, the proper administration of remedies will cure.

Among the leading remedies are: Aconite, bell., pulsatilla, cimicifuga, caulophyllum, sepia, cham., cal. carb., arsenicum, bryonia, helonias, and scores of others, given according to their indications, will cure unless the case has advanced to tissue changes. If the endometritis follow miscarriage or abortion, and if it follows parturition, then the curette should be used to remove any retained membranes. The curette must be used with the necessary precautions. Chronic cases frequently require local treatment—the douche, the medicated tampon, which gives direct medical contact and acts as a support where there is displacement. If we have reason to suspect cancer, the sooner operated upon the better. If the history of the case points to gonorrhœa as the origin, it will require special attention. There are cases that nothing but surgery will cure. If profuse hæmorrhages, the cause is vegetations, polypoid or fibroid tumors, then the case will require surgery. If we have reason to believe the disease has developed from overtaxed nerves, then rest and remedies directed to that source will accomplish the work. Electricity has its place as a remedial agent, but is one of those things which requires very careful and judicious handling or more injury than good will be derived from its use.

CONSERVATIVE OPERATIONS ON THE TUBES AND OVARIES.

JAMES H. THOMPSON, M.D., PITTSBURG.

We live in a period of unprecedented advancement along the line of enlightened progress, and it is pleasing to note that the gynæcological conservatism is awakening from the lethargy and considered the highest aim of surgery, and now the distinctive attitude of the newer and better surgery as contrasted with the widely prevailing radical methods of the last decade. As women possess organs which man has not, and as the parts —physiological and social—that she plays in life differ from those played by man, we should expect to find her afflicted with a certain number of diseases peculiar to her which are dependent upon her anatomy, physiology, and mode of life.

Conservatism is the effort to spare as much as possible of the pelvic organs during an operation, and to conscientiously avoid the removal of any organ or portion of an organ that is sound, as well as of organs or parts which, though not sound, are deemed capable of regeneration. An argument in behalf of conservatism can be found in a report by Dr. W. M. Polk ("Are the Tubes and Ovaries to be Sacrificed in all Cases of Salpingitis?"). By his repeated demonstrations and earnest insistence upon the possibility of restoration of function in diseased adherent tubes and ovaries, and of the functional value of opened and amputated tubes, he has helped to lay the foundation-stones for the important conservative gynæcological work in the immediate future. Conservatism is the general attitude of all true surgery on account of the value of the structures involved. Ovary and tubes are no longer removed *en masse* for purely technical reasons; but a diseased tube or part of a tube, a diseased ovary or part of an ovary, is removed by itself, each without interfering with the other.

The importance of the conserved structures to the welfare of the patient, and with the healthy performance of her functions in the recurring monthly fluxes, ovulation and the possibility of conception lie, though the woman may be unconscious of it, some of the deepest wellsprings of her future happiness. The removal of the sexual organs in woman is, in many instances, similar to the effect produced in a corresponding operation upon a man, disturbing her physical balance and bringing on a wretched state of confusion. It is still a matter for future demonstration whether or not their sequelæ are in all cases obviated by leaving in one or both ovaries when the uterus and tubes are removed and menstruation so checked. C. Schröder stated that one of his reasons for the preservation of part of an ovary was to preserve the function of ovulation, even if it were accompanied by but a theoretical possibility of conception.

It is probable that the ovaries, like the liver and thyroid gland, modify the blood circulation through them, and add to the blood some peculiar product of their metabolism. It may be that this wretched state of confusion, and some of the climac-

teric symptoms, are due to the loss of this substance from the system. It has been clearly demonstrated that when one ovary is removed the other undergoes a compensatory hypertrophy, increasing both in size and weight; the follicles mature and wither more quickly, and the medullary portion increases. Their changes begin within the two months after the operation, and in three or four months the remaining ovary becomes nearly double its original size. Since the ill-effects of castration in women, whether the structures are diseased or not, are often so disastrous, it becomes a question of paramount importance to determine whether we can in any way substitute the lost ovarian tissue; and to this end E. Knauer has shown that the ovaries may be completely severed from their normal surroundings and successfully transplanted either to a part of the broad ligament or between the muscles of the abdominal wall.

The important conclusion may, therefore, be drawn that the ovaries may be transplanted even to a distant point, differing widely from the normal habitat, where they will not only grow, but will continue to develop normal Graafian follicles. It still remains to be shown whether these follicles rupture, and of what use transplanted ovaries may be with animal economy. R. Chrobak has tried, in the second line of experimental substitution of the lost ovarian tissue, that of feeding to the women deprived of their ovaries one of the various organic juices, and in a few cases with distinctly encouraging results. The ovaries of cows, dried and pulverized, and made into tablets containing 0.2 grain of ovarian substance each, were used, two, three, or even four tablets a day. The thyroid glands of sheep, treated similarly, have been used, and share, too, in some mysterious manner, in the processes of general metabolism. The result of broader clinical observations, associated with careful microscopical examinations of tissues removed, is a further reason for the advance made in conservatism, in the more intelligent discrimination experienced in regard to pelvic diseases.

There is the best clinical evidence to show that even a small bit of ovarian tissue left behind, or the stump of an amputated

tube, may not only perform its ordinary functions, but may even contribute and carry an ovum to be lodged in the uterus, and go through the evolutions of a normal pregnancy. Old ideas no longer command respect simply because they come to us with the sanction of years. It is advisable, in removing parovarian cysts in which it is frequently possible by a simple, carefully conducted dissection to extirpate the cyst, to leave behind the otherwise unaffected structures. So extremely important are the ovaries that, if the circumstances justify it, even a small piece of sound ovarian tissue should be preserved. No age limit can be set upon the utility of the ovaries until it has been demonstrated that the internal secretion also ceases with the menopause, a conclusion which is for the present, at least, apparently at variance with the clinical facts.

Having removed one ovary, and when the opposite ovary appears perfectly sound and normal in size, consistence, color and outlines, I in all cases leave it, in a young woman. If it is enlarged, and there is reason to suspect disease, I remove it.

In extra-uterine pregnancy, tubal diseases, parovarian cysts, in hystero-myomectomy, hæmatoma, dermoid cysts and ovarian abscess, there is no reason whatever for the sacrifice of the ovary in removing a diseased or mutilated tube. While an ovarian cystoma commonly involves the entire ovary in such a manner as to prevent the isolation of any definite portion of normal ovarian tissue, in exceptional cases a part, and it may be even the greater part, of the ovary may be found unaffected by cystic degeneration at the base of the tumor.

In order to secure pregnancy it is not necessary to preserve the ovaries and the uterine tubes in pairs, as Kelly has shown by an operation where he removed the right tube and left ovary in March, 1895, pregnancy occurring in September of the same year, and the patient had her first child in June, 1896. In November, 1897, he had to remove the left tube for a ruptured extra-uterine pregnancy. It must be borne in mind, however, that there are other causes than the disease of the adnexa which conspire to keep down the percentage of pregnancies, as, for example, the fact that many of these patients are single, or, if married, the husband has gonorrhœa.

From what is written in the contents of this paper, I make the following condensed statement:

The surgeon must ever bear in mind that his relationship to his patient is not dissolved with the simple successful performance of an operation.

1. He must consider whether the pelvic ailments are sufficient to justify operation.

2. He is called upon to decide whether the symptoms the patient complains of are dependent upon pelvic lesions or are merely coincident with them.

3. Whether the remote sequela of operative interference may not be even more distressing to the patient than the present pains.

These topics will be found fully discussed by A. Hager, H. C. Coe and Dr. William Goodell, as to the effects of castration on women, in "Symptoms *versus* Anatomical Cure after Gynæcological Operations."

One of the reasons why it is difficult to get at some of the remote results of such an operation as castration, for instance, from the moral standpoint, is, that women are naturally reticent about matters of sex. Again, it must be remembered that many of these operations are performed upon poor women and those of the lower class who are ignorant and wholly unused to protesting against injury of any sort, and who accept life as it comes.

In weighing the effects of castration we dare not leave out of sight the common feeling that this particular operation is a degradation to women, and that the majority of physicians and all laymen look upon women deprived of their ovaries as unsexed. My own experience only serves to confirm my opinion that the castration of women is often a direct cause of domestic unhappiness, and that it has been repeatedly used by men as a good reason for breaking off engagements, and for the violation of marriage vows and the abandonment of wife and children.

The scarcity of literature on remote results is somewhat surprising, owing to the many surgeons who do not study their cases for several years after operation in order to learn the effects of extirpation of the pelvic organs. We ought now,

with a greater lapse of time and an abundance of cases, to be in a position to answer all important questions as to the relationship between the various abdominal diseases and the remote sequelæ induced by the operation, invasion of the peritoneal cavity.

I do not propose to make an exhaustive investigation of this subject, but refer you to one of the first systematic investigations of this sort, made by T. Spencer Wells, of London ("Ovaries and Uterine Tumors," 1882). It is computed that by his successful ovariotomies he gave back a sum total of thousands of years of life to women, not to mention the numerous children born to those in whom he was able to conserve one ovary.

In conclusion, I will say, as a general rule laid down, when the disease affects only a portion of a structure, the diseased portion should be removed and as much as possible of the sound tissue left, and if these organs are removed, the reason for the extirpation must be grounded in the actual conditions of the organ itself.

Cysts of the ovary are most frequently observed during the period of sexual activity, yet it is undoubtedly true that not only do the germs of many of these tumors date from fœtal life, but that the actual formation of the neoplasm has often begun at that time, to remain latent until it receives some impulse which causes it to develop. This certainly occurs in the case of dermoid cysts, and many observations tend to show that it also occurs with proliferous glandular and papillary cysts.

The idea of conservatism is the willingness to try to save tissue, and particularly so as the gynæcologists are trying to save every part of ovarian tissue that is healthy. It seems to be the turn in the surgical affairs just now to puncture and to cut out cysts rather than to remove ovaries *en masse.* The claim is reasonable that a patient has saved to her organs that are necessary, and the sacrifice once made is now deplored.

In the traditions of general surgery, and its best principles all point toward conservatism as its highest goal, there are no reasons for making any exceptions to these rules in the special field of gynæcological surgery. This most radical procedure

must be carefully guarded by operating only upon suitable and stringent indications. In young women, when the ovaries are not diseased, they must be left in the pelvis, confining the enucleation to the tubes and uterus. The removal of the uterus with the tubes and ovaries is to be recommended, because without the ovaries it is a useless organ, which may of itself, at a later date, become the source of such serious disturbances as to require its removal. In almost all pelvic inflammatory cases the uterus is traceable as the avenue of infection, and the retention of the same often insures the persistence of a leucorrhœal discharge, protracted hæmorrhages, and a sense of weight and pelvic discomfort which seriously mar the results of the operation. The backward displacement of the uterus onto the pelvic floor, when robbed of its adnexa, may also cause distress and obstruction of the rectum.

But we must recognize and combat the different pelvic diseases if we would bring comfort to these patients and obliterate a stigma that dims the lustre of our great art, gynæcological surgery.

REPORT OF THE SECTION OF PATHOLOGY AND PATHOLOGICAL ANATOMY.

Homœopathy and Patholgy, by W. K. Ingersoll, M.D.
Tetanus—Report of a Case, with Recovery, by Woodward D. Carter, M.D.
Transposition of the Thoracic Organs, by E. W. Mercer, M.D.
The Pathology of Myopathic Dystrophy, by Edwin H. Van Deusen, M.D.

HOMŒOPATHY AND PATHOLOGY.

W. K. INGERSOLL, M.D., PHILADELPHIA.

I WISH to present to you some of the vagaries of a general practitioner in reference to Homœopathy and Pathology.

Homœopathy is a method of the administration of drugs to aid the body in overcoming and resisting the elements of disease, and Pathology is the study of these elements.

By the term disease, I mean the phenomena exhibited by the invasion, growth, reproduction and poison formation of living bodies within the tissues—the lower, simpler forms of life preying upon the higher, more specialized and complex forms. In this definition of disease are not classed malformations, malpositions, traumatisms, or the effect of non-living toxic substances.

The study of pathology, then, means very largely the study of the lowest forms of life—chemically, morphologically, in the tissues, and outside of the tissues. And if our rule of practice shall ever be proven, it must be from the knowledge gained of definite action of drugs upon the chemical constitution of the poison formed by these lower organisms, or on the life and growth of them.

It is known that quinine will stop the growth of some of the forms of the plasmodium malariæ, when a weak solution is mixed with blood containing them, under the microscope. We ought to know what bry. will do with the diplococcus or pneu-

mococcus, or bell. in the life of the streptococcus, and other drugs in their action.

There are some men who still question the part germs play in the production of morbid processes. The question as to whether 'tis the individual germ, or the poison produced by its life, is the destructive agency, is of little consequence. The facts accumulated as to the part played by germs are too many and too well established to now be questioned, nor is it rational to think any animal or vegetable will originate within itself elements for its own destruction. Granted that such might be, the law of heredity, acting along subsequent generations, would tend to wipe out the very existence of the type.

This is what pathology has to say to the physician: Accept, understand, appreciate the relations of germs to disease—not one disease, but all. Surgeons have been acting upon this belief, with brilliant results and rapid progress, for twenty years or more, while we physicians have been drifting along in a kind of No Man's Land.

Histology began in the study of the vegetable cell. Its characters were found to persist in the animal cell, and we can say they are homologous, morphologous, and analogous. They are subject to disease and destructive agencies of like nature. Though the bacterial diseases of plant life are an almost unexplored region, we know of some few disease organisms of animal life that are richly reproduced on purely vegetable nutrient bases.

Germs will not live in their own excreta. Here lies the cause of immunity, which is found in the so-called zymotic diseases. There is left some of the fermentive product, which protects against a new invasion. These substances are called enzymes, and I herewith insert an abstract from the *Boston Medical and Surgical Journal:*

"R. Emmerich and O. Loew have made an interesting contribution to the subject of immunity to infectious diseases. They report the results of a long series of experiments, their summary of which is essentially as follows: The cessation of growth which is observed in most cultures of bacteria before all the nutrient substances are used up is due to the develop-

ment of an enzyme-like substance which is formed by the bacteria themselves. This substance is capable, in turn, of destroying and dissolving the bacteria. Some of these enzymes cannot only destroy and dissolve the same species of bacteria which produced them, but they can also destroy other species of bacteria.

"The curative effects of the so-called products of metabolism of bacteria or of unfiltered cultures of bacteria is due to the action of these bacterial enzymes in the culture fluids.

"The artificial immunity produced by the products of bacterial metabolism or by cultures of pathogenic bacteria is due to the fact that the bacterolytic enzyme combines slowly with an albuminous substance in the blood. The resulting compound has the same bacteria-destroying powers as the original enzyme itself. This combination, which takes place in the animal body only, slowly and with great waste of enzyme, may be produced rapidly *in vitro* by chemical action. We are now, therefore, in a position, at least in some of the infectious diseases, to produce artificially an antitoxic serum without the aid of the animal organism.

"The so-called 'agglutination' or 'clump reaction' is nothing but the first stage of the bacteria-destroying power of a bacteriolytic enzyme combined with the albumin of the blood.

"The serum of immune animals is much more bactericidal in its effects in the absence of air than in the presence of air. This is a fact that has been completely overlooked. By great concentration of such serum marked bactericidal effects may be produced even in the presence of air.

"Some bacterial enzymes when introduced into the animal body act not only destructively upon the bacteria which may be present, but also upon the bacterial poisons or toxins. Thus, for example, the enzyme of the *bacillus pyocyaneus* can completely neutralize the fatal effects of the toxin or poison produced by the *diphtheria bacillus*.

"Judging from the experiments on animals, the enzyme of the *bacillus pyocyaneus* should be suitable for the successful treatment of anthrax, plague, diphtheria, etc., in man. By means

of an antitoxic serum produced artificially *in vitro* with the enzyme of the *bacillus pyocyaneus* an immunity against anthrax of a high grade may be produced in animals.

"The bactericidal effect of normal blood is probably also due to enzyme-like substances in it. The fact that high concentration of normal blood gives it the property of agglutination for certain bacteria is a point in favor of this idea."

I now want to recapitulate, and bring to your minds that these enzymes are produced by the disease germs themselves, associated with toxin, or are the toxins themselves changed by their union with albumin, or animal substances. I want to impress the fact of the slowness of the union of toxins to produce albuminous enzymes. Also the likeness of the animal and vegetable cell subject to the same distinctive diseases.

There is a possibility that within the plants, toxins which have not united with albumin, but with juices which, for them, have played the part of an enzyme, and through long years of reproduction and growth may have, by the law of the survival of the fittest, become an organic part of their life. It may be an alkaloid in one, a resin in another, or essential oil in a third, which protects the plant against a germ invasion.

These very substances, when introduced into the animal body, produce symptoms like the toxins of disease, and slowly uniting, by small and often-repeated doses, with the albumins of the tissues, act as an enzyme, limiting germ reproduction, or neutralizing their poisons.

The symptoms produced by a drug have thus far been our only guide to its power of resisting disease, or limiting its effects. I do not say that all drugs act in this way, for I do not think they do. But it is a rational theory, and I hope some of the younger generation may take the time and mind to study the action of plant substances upon bacterial life, and thereby place our system of treatment on a scientific basis.

TETANUS—REPORT OF A CASE, WITH RECOVERY.

WOODWARD D. CARTER, M.D., PHILADELPHIA.

THE fact that tetanus, in almost every case, is preceded by a wound of some character has been recognized for many years. But it remained for Nicolier, in 1884, to demonstrate the presence of the bacillus of tetanus as the specific cause of the disease. This was further confirmed by Kitasato in 1889, who succeeded in obtaining a pure culture.

The bacilli are long, rather slender, having a rounded end, in which is seen a bright round spore. They seldom unite in chains, are non-motile and have no flagella. They are found in most garden-earth, dust and manure, and sometimes in the intestinal discharges of animals.

Owing to the fact that the smallest amount of oxygen will destroy the growth of the bacillus, it has been very hard to cultivate. The following method, originated by Kitasato, is now universally employed. He exposed the material to be investigated for an hour to a temperature of 80° C. This destroyed the majority of spores except tetanus, making their cultivation in gelatine or agar-agar a matter of easy accomplishment.

The tetanus toxine is prepared by growing the bacilli in bouillon, the culture medium being kept at a temperature of 37° C., and allowed to remain from two to four weeks. By this time it will have gained sufficient strength.

It is easily destroyed by heat or light, so that a cool, dark place is necessary to preserve it. The gradual introduction of this toxine into the blood of animals enabled Behring to produce the antitoxic serum of tetanus. The results obtained from the use of serum in the treatment of this dread malady in man have been somewhat disappointing. Extensive experimentation, however, has shown that the investigations have been conducted in the right direction.

Tizzoni claims that the usual mortality rate is 80 per cent. Up to 1898 he had collected 114 cases treated with antitoxine,

which gave a mortality death-rate of 46 per cent. But eliminating a large number which appeared after a long period of incubation, as well as those which were only of mild form, he found that 38.7 per cent. of the acute severe cases recovered as compared with 20 per cent. under the old-line treatment.

He calls attention to the fact that it takes twenty-four hours for complete saturation of the system with antitoxine. In cases, therefore, which are of rapid onset and short duration, antitoxine can be of no benefit. He advises, therefore, preventive inoculations of antitoxine in man and animals with dirt-laden wounds. This recommendation is based upon Roux's statement, that the toxine can be readily neutralized at the time of infection. But a short time after it requires doses thousands of times larger to accomplish the same result.

Lanphear (*American Journal of Surgery and Gynæcology*, July, 1899) has personally collected reports of 38 cases from Iowa, Missouri and Illinois, of which 20 died and 18 recovered, a mortality of 52 per cent. He also gives reports collected from various sources, *e.g.*, W. E. Green, Great Britain, reports 36 cases treated with serum, with 25 recoveries; R. F. Wier, New York, 11 cases with 9 recoveries. Haddeus, Germany, says that "tetanus antitoxine should be given in every case, as it is a specific if given soon after the appearance of the toxic symptoms." C. L. Fraser (in the London *Lancet*, August 26, 1899) reports a case with recovery.

Dr. W. M. James, New York, successfully treated a case of tetanus with antitoxine. He remarks that he has seen thirty cases of tetanus, with fatal results in every case, until this last experience (*New York Medical Record*, September 9, 1899).

A series of experiments have recently been published by Roux and Borrell (*Annals de Institut Pasteur*, April, 1898). A portion of the brain substance of a guinea pig was crushed and mixed with some tetanic toxine and the mixture centrifugalized. This separated into two layers, the upper an opalescent fluid, the lower the nervous substance. The lower layer contained the tetanic toxine, while the upper had comparatively none. From this they argued that tetanic toxine, finding its way into the organism, is appropriated by the nerve cells.

Marie has pointed out that the poison reaches the nerve centres by two routes; a part follows the course of the nerves and is fixed by the cells of the spinal cord; another portion of the poison enters the blood, whence it is extracted by the nerve cells. Thus the cells of the cerebrum can be affected by the toxine brought to them through the circulation.

Furthermore, Roux and Borrell found that where toxine was injected directly into the brain of guinea pigs, the dose required to cause tetanus was much smaller than when a subcutaneous injection was made. "Cerebral tetanus" results from the former owing to the nearly immediate fixation of the tetanic poison, and the symptoms are excitement, intermittent convulsive attacks, motor disturbances and polyuria.

From these experiments the authors drew the following conclusions: "The tetanic antitoxine when injected into animals remains in the blood, whereas the toxine is extracted from it and fixed by the nerve cells. The antidote does not come in contact with the poison, and the two substances, though so near each other, fail to meet. The serum is efficacious against toxine, which is placed under the skin because the greater part of it enters the blood, but it proves powerless against the poison which has already reached the nervous elements."

To overcome this difficulty and enable the antitoxine to spread by direct continuity of nerve structure, the authors trephined and injected the antitoxine into the brain substance.

Geo. C. Rambaud, M.D. (*New York Journal*, December 17, 1898), makes report of their experiments thus: "They treated with intracerebral injections of antitoxine 45 tetanized guinea pigs, 35 of them recovered; 17 others were treated with subcutaneous injections, only 2 of them survived; 17 guinea pigs were not treated with the serum; all died. Theory and experimentation agreed. Antitoxine introduced into the brain protects the upper part of the cord when the lower portion is already affected by the poison, but it does not cure the lesions that have already taken place; the contractions existing at the time of intervention persist for some time, and Roux and Borrell state that if the medulla is already poisoned (shown by im-

paired deglutition and possibly respiratory disturbances) death cannot be prevented.

"After the excellent results obtained in animals, it remained to try the experiment in man. It might be objected that the risks incurred are numerous; but since it is the only chance the patient has, he should receive the benefit of it.

"However, after some consideration, it can be seen that the risks are really trivial.

"If the intra cerebral injection is made in a neutral area, such as the forepart of the frontal lobes, the result of the trauma is minimized; the injury caused by the small hypodermic needle is trifling, the quantity of serum injected is comparatively small, and being introduced slowly, no undue compression is caused; hæmorrhage from the dura and pia are easily avoided; the button of bone removed being small, healing of bone takes place rapidly, and no subsequent adhesions, leading to irritation, are likely to occur.

"It must be added that, notwithstanding the intra cerebral injection, it is necessary, for obvious reasons, to continue to give antitoxine intravenously or subcutaneously for a few days; the toxine in circulation with the blood, together with that which continues to be secreted at the site of the injury, is thereby neutralized, and cannot affect the nervous centres."

Dr. Rambaud in the same article reports a series of 11 cases, 3 of which came under his own observation, and the rest were collected from abroad. All of these were treated with the combined method—*i.e.*, serum injected into the cerebrum and subcutaneously. Of these cases 5 recovered.

Dr. Lanphear has also collected a series of 11 cases, making a total of 22 operations for intra cerebral injections of serum, with 13 deaths and 9 recoveries—a death-rate of 59 per cent.

In the following case the subcutaneous injections were wholly used, although the hospital facilities were offered by Dr. Van Lennep for the intra cerebral injection. But the patient improved so rapidly under the subcutaneous injections that the latter method was not thought necessary:

W. T. F., 13 years. On January 11, 1899, was struck with a piece of ice on the left side of the lower jaw, near the angle,

the resulting injury being a lacerated and punctured wound. This was washed with castile soap and covered with court plaster. In two days the wound was apparently healed.

Three days from the inception of the wound, swelling and hardness appeared at the seat of injury and caused considerable pain. The mother poulticed this with flaxseed.

From January 15th to 27th there was marked stiffness of the jaws with tonic spasm of the left side of the face, together with pain in the neck, jaws and shoulders. Sudden twitchings of muscles occurred, with some rigidity of muscles of the entire body, particularly the dorsal groups.

On January 27th I was called to see the case. The parents reported that during the night the patient was awakened from sleep with a series of violent tonic contractions of muscles of the whole body. This lasted for twenty minutes. The patient became cyanotic, lost consciousness, from which he recovered after the expectoration of quantities of bloody mucus.

Upon examination the following conditions were evidenced: Jaws were tightly locked, the muscles of the face had assumed the characteristic picture described as risus sardonicus. The neck muscles were perfectly rigid, as were those of the back and abdomen. The legs and arms were lax.

Dr. W. D. Bayley was called in consultation in the afternoon of the same day. The same conditions now prevailed, excepting that the leg muscles were rigidly contracted so that the patient, while perfectly conscious, could have been actually raised by his feet like a board and stood on his head. The temperature was normal, pulse 80.

The subcutaneous injection of antitetanic serum was advised. Twenty c.c. was at once injected into the chest muscles.

January 28. The patient had three general tonic spasms, the position of opisthotonos being assumed. Each spasm was followed with great prostration. Slept about five minutes at a time at twenty-minute intervals. General clonic jerking of groups of muscles. Thirty c.c. of serum was injected.

January 29. During the night had one tonic spasm, but clonic spsams continue as before. Leg muscles more lax. Slept fifteen or twenty minutes at a time. Temperature, 101;

pulse, 100. Bowels moved by enema. Takes nourishment through a tube. Injection 20 c.c. of serum.

January 30. Injection 20 c.c. of serum; slight improvement. Temperature, 99; pulse, 80.

January 31. Injection 20 c.c. of serum. Temperature normal; pulse, 80. No tonic spasms. Could open the jaw far enough to drink nourishment from a cup.

February 1. Injection 20 c.c. of serum.

February 2. Injection 20 c.c of serum.

February 3. Injection 20 c.c. of serum. At the seat of each needle puncture a diffuse erythema appeared.

February 4. Erythema increased. Could open jaws ¾ inch. Formed bowel movement, passed normally. Injection of 20 c.c. of serum.

February 5. Muscles more relaxed. No clonic spasms. Three watery bowel movements. Erythema appearing over all portions of the body. Serum injected, 10 c.c.

February 6. Complained of intense headache. The rash not so marked. The use of serum was discontinued. ℞. Hyoscy. in water.

February 7. Headache continues. Temperature, 101; pulse, 120. ℞. Hyoscy.

February 8 to 11. No change whatever.

February 12. Improvement. Temperature, 100; pulse, 88. ℞. continued.

February 13. Diarrhœa, green, watery stools. ℞. Bell.

February 14 to March 3. Gradual improvement. Jaw slowly relaxed until March 10, when patient was discharged completely recovered. In conclusion, I would call your attention to the following points in the case:

1. The period of incubation was three days.

2. The first injection of serum was given sixteen days after the injury.

3. The prompt improvement in the symptoms following the first injection of serum. The total quantity of serum used was 200 c.c.

4. The diarrhœa and rise of temperature which occurred on February 7th. The cause of this was attributed to the use of

the serum. Believing that in this case the physiological limit had been reached, the serum was discontinued, followed by an abatement of the symptoms.

5. The patient's appetite at no time failed him. He was ravenously hungry, and would take great quantities of liquid and, later, solid nourishment.

6. The appearance of the erythema spreading from the seat of the injection until it became almost universal. I was unable to determine the cause of this, attributing it to either the lysol, which was used as a disinfectant, or to the serum. A discontinuance of the lysol solved this question, since the rash appeared at the seat of each subsequent needle-puncture, as it had before when the lysol was being used.

DISCUSSION.

Dr. Hassler: In regard to Dr. Carter's paper, and in regard to injections of serum, as advised by different men and quoted by Dr. Carter, I doubt that serums have the proper effect. In the first place, we know that tetanus is simply a myelitis, and I believe in tetanus we should simply look for the prevention of more absorption from the blood. I believe that the only method, and when the temperature may act more favorably, is first by blood-letting, attenuating the blood by infusion, and then injecting the serum. The only way to treat tetanus is to prevent absorption. I doubt whether any serum will have an effect on the muscles, and as tetanus is simply a case of myelitis, attenuation of the blood will prevent further absorption, and then the serum will act more effectively.

TRANSPOSITION OF THE THORACIC ORGANS.

E. W. MERCER, M.D., PHILADELPHIA.

THE case was that of transposition of the thoracic organs. A little over a year ago, perhaps, I was called to see a case of Dr. Imes'—an obstetrical case—and while there my attention was called to the fact that one of the children of this woman had the heart on the wrong side, or rather on the right side, and I suggested to the doctor that (as this happened in the night it could not be examined) he bring the case to me. I did not hear anything more of it, presuming we would have plenty of time to examine the case. Only a few months ago the woman came in for the next confinement in the maternity of the Hahnemann hospital, and the subject was again brought to my mind, and I thought that I would have an opportunity to examine it; but the woman was discharged, and I never had a chance to see the child alive. Shortly after she returned home I received a message from Dr. Imes, telling me that the little one had died. It was between three and four years old, and they consented to have a postmortem examination made, so I notified Dr. D. Bushrod James of the fact, and we went down together, and he made the autopsy. I thought, in this connection, that it would be a good opportunity, inasmuch as these are rare cases, to speak to Dr. Weaver. He said that in his years of experience—thirty-five years—he had seen perhaps but two cases of such a malformation, such a freak, one besides this, and that the members of this Society ought to have an opportunity of seeing it. So, after the meeting, I will show the specimen to you. All the thoracic organs are in unusual positions. I had intended to ask Dr. Weaver demonstrate them to us, but he is at present away on his vacation. I have the specimens in the adjoining room for inspection.

SOME REMARKS ON THE PATHOLOGY OF MYOPATHIC DYSTROPHY.

EDWIN H. VAN DEUSEN, PHILADELPHIA.

BOUCHARD five years ago made this statement: "There are four chief pathogenic processes: 1. Primary elementary dystrophies. 2. Nerve reactions. 3. Disturbances antecedent to nutrition; and, 4. Infection.

"The first of these processes is the most simple, but it is the least studied, and I may add that it is almost completely unknown. It is that which arises from the vital activity of cells when it is directly brought under our notice by some cause, physical, mechanical or chemical; from the lightning stroke to the intoxications, or by the way of traumatism."

This paper has to do especially with that form of progressive muscular paralysis where there is no discoverable primary lesion of the central or peripheral nerve-structures. The paper makes no pretense to solve mysteries, but is presented merely with a desire to attract attention to a subject which is so little studied, and, to quote again, "almost completely unknown."

The paralysis in myopathic dystrophies is not due to any defect in nervous energy, nor to any defect in the trasmission-power of the nerves, but to a transformation of the muscular fibre into fatty tissue so gradually that the more or less completed process includes decades rather than years. There is only one symptom, and that is loss of power which is directly proportioned to the fatty metamorphosis. This fatty change occurs in both striated and unstriated muscular fibres. In the case of voluntary muscles the change is usually, perhaps always, bilaterally symmetrical; the extensor muscles are usually first affected, and continue more affected than the flexors. The nomenclature of the muscles of the leg makes an exception, which, however, is only apparent. The tibialis anticus fails first, and continues relatively weaker than the antagonizing

gastrocnemius and soleus to the end of the case. Death takes place from inability of the heart muscle to fulfill the demands made upon it, no matter whether the burial certificate reads pneumonia, bronchitis, whooping-cough or what not. In advanced cases, macroscopically, the muscles look like masses of fat. They may, and usually do, retain their form, but an examination with the microscope may be necessary to discover any muscle fibre.

A paralysis quite naturally suggests a lesion of the nervous system.

A paraylsis without a lesion of the nervous system is quite conceivable, for the performance of a muscle's function is dependent upon two factors, the absence of either of which inhibits the function. These factors are:

1. The inherent power to move, which resides in the muscle alone, and

2. The stimulus necessary to cause motion, which resides in the nervous system alone. (Chemical and mechanical causes of muscular contraction are not here considered, since they are not ordinarily operative.)

When the stimulus to motion is lacking, whether from failure of the central organ or from a solution of continuity of the transmitting nerve, the power of motion is lost, for muscles do not move of themselves, no matter how great their inherent power of motion. Furthermore, when the stimulus to motion is lacking the inherent power to move diminishes proportionally, for this power depends upon nutrition, and nutrition depends in part upon functional activity.

On the other hand, this question presents itself: Can the inherent power to move, residing in the muscle alone, be affected without a disturbance, either antecedent or consequent, of the organs supplying the stimulus? Can the muscle lose its power without any affection of the nervous system?

Well, why not?

Except that we are so accustomed to tracing every evidence of functional activity in the body back to the cerebro-spinal or sympathetic nervous systems, there is no *a priori* reason for a negative answer.

There are frequently-occurring illustrations of trophic changes in tissue entirely independent of any pathological condition of the nervous system. Without resulting from exercise we see a peculiarly large muscular development of certain portions of the body. Sometimes it is the calf and sometimes the thigh, sometimes the legs and sometimes the arms. In other instances, the fatty deposits are made very irregularly. You will find the women of one family with large arms and busts and small legs. In another family the women will have slim arms and an appearance of actual emaciation about the chest, and yet their legs will exceed all the standard artistic measurements. We have also seen men with enormously fat abdomens and rather slim legs. All the tissues partake of these vagaries. The variations in form and feature of individuals and families are almost as great as their number.

The fact that these are inherited peculiarities is no contradiction of the proposition that trophic changes, even to a pathological degree, take place independent of any pathological change in the nervous system. Our search for a cause of these trophic changes will bring us face to face with the existence in each ultimate cell of a something which we may call nutritive power, vital activity, vital energy, vital force, etc., but which is the something whose presence or absence is the final index of life or death.

The investigation of cell-nutrition does not require the theoretical acceptance of the existence of a system of trophic nerves and trophic nerve-centres. Such a system is, of course, not impossible, but if it exists at all, its function is probably to coordinate and not to inspire nutrition. The proper pabulum must be supplied, but the nutrition of the cell depends upon its own inherent power of appropriating the material to its needs. Faulty cell-nutrition results from either one or both of two causes:

1. Supply of faulty material, or
2. Perverted nutritional power or vital activity.

Myopathic dystrophy, therefore, may be supposed to result from

1. Improper or imperfect blood supply, or

2. Perverted nutritional power in the muscle cells.

With this as a working hypothesis we may arrive at a reasonable treatment for the disease. It will take years, however, to demonstrate its success or failure.

Dietetically, the nitrogenous foods are to be selected and the hydro-carbons or carbo-hydrates, or both, if a distinction is made, are to be rejected.

Hygienically, exercise in the open air to the point of tolerance, with a special attention directed to affected parts, is to be recommended.

Medicinally, we are to select phosphorus or some such deeply-acting remedy capable of inducing changes in ultimate nutritional activity.

REPORT OF THE SECTION OF PÆDOLOGY.

Bronchitis, by Anna C. Clarke, M.D.
Some Peculiarities of the Respiratory Organs of Infants and Children, by William H. Bigler, M.D.
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BRONCHITIS.

ANNA C. CLARKE, SCRANTON.

Acute bronchitis constitutes nearly two-thirds of all the conditions a physician is called upon to treat in childhood. Its frequency decreases after two years of age until puberty. It is often accompanied by acute catarrh of the upper air-passages. It almost invariably accompanies measles and influenza. Is common in pertussis, scarlet fever, typhoid fever and diphtheria, and may occur in any infectious disease. It is more frequent in the cold months, but is apt to follow any sudden change of weather. Children inheriting weak constitutions, as shown by rickets and malnutrition, as well as those whose parents are of the hysterical order, are predisposed to such attacks. The instability of the nervous system, more particulary the vaso-motor, renders such children especially liable to catarrhal diseases when exposed to the slighest draughts. The cutaneous nerves of temperature sense are less inured to sudden changes of atmosphere, and as a result they take cold more easily.

Among the predisposing causes may be classed organic heart trouble, hypertrophy of the bronchial glands, obstruction to the upper air-passages which lead to mouth-breathing.

Most parents have an idea that a child, especially an infant, must be loaded with clothes, and as a result the skin is bathed with perspiration, and they are in the best possible condition for the slighest draught to chill the surface and congest the bronchial membranes. Too much clothing is nearly as bad in its

results as not enough. In older children the footwear should receive more attention, and the shoes should be heavy enough to protect against cold and damp pavements without the use of overshoes.

As regards life, bronchitis is not a dangerous disease except in infants, and it is not the object of this paper to go into the symptomatology of the acute stage, but more to call attention to the danger of neglecting these cases because they do not appear to be dangerous. Consider for a moment the structure of the lungs in early life, the low muscular development of the air-cells, and it is easily understood how it is but a step from simple bronchitis to dangerous bronchial pneumonia.

It has been my lot to treat a large number of these cases in private as well as in institutions, and I have found the danger lies in extension of the inflammation, and in the difficulty of keeping the cases under observation until all the physical signs have disappeared—especially the latter kind of cases in private practice.

I have found the most successful treatment is that of expectancy. In mild attacks the patient should be kept in the house, and if possible confined to one room, so as to protect from draught, and at the same time give free ventilation. If the temperature goes above 100.5 F. the bed is the safest place.

In the beginning the chest is filled with sibillant and sonorous *râles*, which are replaced in from twelve to twenty-four hours by moist *râles*, coarse or fine according to the size of the bronchi involved. It is impossible at this stage to tell where the disease will stop. In young and delicate infants, and more especially if the bronchitis is secondary to some other disease, it may spread very rapidly and involve the capillary bronchia. The younger the child the more difficulty there is in cleaning the tubes, and the patient is liable to die from suffocation. Death in these cases is frequently preceded by convulsions and spasms, and shows how profoundly the nervous system is shocked by the carbonic-acid poison.

It is well to bear in mind that in broncho-pneumonia we are dealing with a catarrhal and not a croupous condition which undergoes resolution in from five to seven days, but we are

dealing with a condition which may last for from one to two weeks to as many months, the patient apparently being better and worse, but not well. In fact it is not a true pneumonia, but a cutting off of a portion of the lung-tissue by filling of the capillary bronchi with inspissated mucus. A physical examination will disclose dullness over a portion of the lung to-day, and to-morrow that place will have cleared and another portion have become involved.

In broncho-pneumonia the respiration and the respiratory changes must be carefully watched, for the danger is from improper oxygenation of the blood, as shown by the blueness of the lips and a marble-like condition of the cheeks. In croupous pneumonia the danger comes from the inflamed lung-tissue obstructing the blood and preventing it from completing its circuit and thus over-distending the right ventricle, and we have death from true heart failure.

It pays to take the time and make a careful diagnosis in cases. It simplifies the treatment.

The first indication is to reduce the viscidity of the mucus, which is poured out in such quantities as to fill the bronchi and obstruct the air-cells. Second, to stimulate expectoration.

As to the remedies, I have found of most service bryonia alb. 3x in the early stages; and, while the large bronchia are affected, there is dry cough, difficult breathing, flushed face and congestive headache. Ipecac. will be useful in those cases where the rheumatic symptoms are evident, as shown by the asthmatic breathing. In small children, where the mucus that is raised is swallowed, we have, as a result, the gastro-intestinal tract deranged from extension of the catarrhal condition.

Antimonium tart. 3x is in very close relation to ipecac., only it affects the system more profoundly, and we have great oppression and suffocative breathing, extensive mucus *râles* but nothing raised with the cough, profuse sweating without relief, copious diarrhœa; there is sopor, delirium, and in fact everything points to a paralysis of the nerve-centres, due to carbonic-acid poisoning.

Kali bichrom., when the mucus is extremely tenacious, has to be pulled out of the mouth in strings. In fact, I believe

the potassium salts are among the best expectorants we have. I frequently use bichromate of potash, two grains to five ounces of water, in a croup-kettle, for inhalation, with most gratifying results. The child should always be placed under a tent, and the inhalation given of about fifteen or twenty minutes' duration, from four to twelve times per day, according to the requirements of the case.

The steam inhalation, by the way, is a most convenient method of administering medicines in this disease where the stomach is especially sensitive.

Cuprum ars. 2x has saved cases for me where there was extreme exhaustion, and the breathing and cough spasmodic, and there was a tendency to convulsions.

I wish to urge the use of water in these cases; it is a most valuable aid to expectoration. When the child has a good degree of fever it will not require urging, but it should be given in liberal quantities, and when the cough is accompanied with constant irritation in the throat, one part glycerine and two parts water will be found useful to allay the tickling and help raise the mucus.

In bronchitis, local applications I believe do little good; and as regards poultices, the flaxseed and other heavy material so often used I believe to be positively detrimental. It simply adds weight to the chest to be lifted with every labored breath. To protect the chest from exposure the absorbent cotton jacket, covered with oiled silk, will be found most useful. The strength must be kept up, and in the very young that is no easy matter, as the constant coughing interferes with nursing. I recall one case in which the infant was unable to nurse except while it was taking the steam inhalations. Cocoa-butter rubbing has been of great assistance, and in extreme cases do not neglect victual-feeding. Then be sure your patient entirely recovers. I think the medical profession often neglects its duty by not pointing out to the parents the danger that often follows this disease. The tendency is strong to consider the patient well when the acute symptoms have subsided—yet we all know how common the bronchial cough is. It would not be present if nature were not endeavoring to rid the lungs of

some irritant. We should remember that we have had an acute inflammation, more or less extensive, often with shedding of a large amount of epithelium. The membrane is left raw, the secretions altered, if not destroyed. The underlying tissue may be sufficiently swollen, so as to temporarily obstruct the finer bronchi. The air-cells are forced open and filled with the muco-purulent discharge which becomes encysted and prevents proper oxidation of the blood, as well as obstructs circulation and throws extra work on the heart. It is not uncommon to find fine *râles* and areas of dullness in children several months after they have apparently recovered. All this means a lack of nutrition to the lungs, and nature is prevented from doing the necessary repair work. Cicatrization follows, and we have the best possible condition for future lung trouble. We cannot have so important an organ disabled and not have the entire system suffer. The nerve-balance is lost and asthma the result. We know that asthma and bronchitis travel in a vicious circle, one aggravating the other, and a careful examination of the chest between the asthmatic attacks will often show the remains of an old bronchitis, and give the keynote to the successful treatment.

The respiratory muscles become weakened from disuse, and we have the flat-chested people with a history of weak lungs and low vitality who so easily fall victims to pulmonary tuberculosis, since they present the best soil for the development of the tubercle bacillus.

The profession seems to realize the importance of the sequelæ of bronchitis in adults, but I fear we have not been careful enough to overcome the tendency to lung trouble in early years. If we can bring a child to the age of puberty with sound lung-tissue and a fully developed breathing apparatus, we need have little fear for the future, and I believe this end can be best obtained by curing the bronchitis of infancy and childhood.

SOME PECULIARITIES OF THE RESPIRATORY ORGANS IN INFANTS AND CHILDREN.

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The number of diseases and diseased conditions which are strictly peculiar to infancy and childhood, and which do not occur in adults, is exceedingly small, and the study of pædology as an independent branch of general medical practice would hardly be justified by an appeal to them. Hence many writers on the subject no longer name their works "Diseases of Children," but, more correctly, "Diseases in Children," basing their independent position upon the fact that disease as found in the adult, and as forming the proper subject of works on practice, is modified in its symptoms, means of diagnosis and elements of prognosis, as well as measurably in its treatment, by certain anatomical and physiological peculiarities of infancy and childhood. These peculiarities have in later years been more carefully and scientifically investigated than formerly, and have proved the origin and basis, as they are the only justification of pædology. That the propriety and necessity of such separate treatment of disease in children has been recognized by the profession is seen from the numerous more or less voluminous works on the subject that have appeared in late years, as well as from the increased amount of time devoted to its teaching in our medical colleges. In medicine, as well as in commercial affairs, demand and supply are most intimately connected.

The purpose of the present short paper is to draw renewed attention to some of the peculiarities of the respiratory organs in infancy and childhood which influence the manifestations of disease occurring in them, and which are, therefore, of importance in their relation to prophylaxis, diagnosis, prognosis and treatment.

It is well known, but too often forgotten, how important a

place among the respiratory organs the nose and naso-pharynx were intended to occupy. In its passage through these organs the air, which is destined to convey to the body the life-giving oxygen, is to be warmed, moistened and filtered. The normal healthy infant breathes with its mouth shut, and is, therefore, dependent for its supply of air upon what can be drawn in through the naso-pharynx. This is relatively long and shallow, and in its respiratory portion very narrow, while the posterior nares are about just large enough to admit the end of a medium-sized male catheter. It can readily be seen how this condition may very materially affect the symptoms and importance of disease attacking these cavities. A simple rhinitis, by the accompanying congestion and extra secretion of mucus, can so occlude the passages as to render the ingress of air impossible, thus compelling mouth-breathing and its attending evils. The air thus inhaled without the preparatory modifications may, and very often does, set up congestion and inflammation in the larynx, bronchial tubes, and even the lungs. Hence, in infants and children, influenza is so frequently followed directly by inflammatory conditions lower down in the respiratory tract, especially in such seasons of the year when the tempering influence of the nasal mucous membrane upon damp or cold air is particularly necessary. Again, by its interference with nursing, and consequently with obtaining sufficient nourishment, occlusion of the naso-pharynx may cause death directly by inanition, or indirectly by rendering the child more open to infection from other diseases. It has a tendency, also, in very young children to produce so-called adenoid vegetations, and in older ones their recurrence after removal. An apparent "cold in the head" or "snuffles" in young children is not, therefore, to be lightly regarded, as is too often the case.

A rich plexus of absorbents in the posterior wall of the naso-pharynx, the faucial and pharyngeal tonsils, together with lymphoid masses under the mucous membrane of the posterior third of the tongue, form a ring of lymphoid tissue around the entrance of the pharynx which has an important bearing upon the wider-spread effects of diseases of this region. The

peculiar severity of nasal diphtheria is no doubt due to the richness in absorbents found in the naso-pharynx, as contrasted with the comparative poverty in this respect of the faucial tonsils. Besides the danger of systemic infection by the absorption of infectious material here, the mechanical effects of obliteration of the naso-pharyngeal passage by the enlargement of the pharyngeal tonsil are well-known—mouth-breathing, malformation of the chest, faulty physical growth, deafness and impaired mental development, etc.

The thorax of the child differs considerably from that of the adult. The ribs run more horizontally in direction and form the lateral walls of the thoracic cavity, and, in consequence of the imperfect osseous development, the thorax as a whole is more elastic and less rigid. It yields, therefore, more easily to pressure from within and from without, and can expand in almost any direction. The lumen of the larynx in infants is so small that even a moderate swelling of its mucous membrane will suffice to cause stenosis and call forth suffocative symptoms.

The extent of the bronchial tree in infants and children is greater than that of the air spaces, and the connective-tissue stroma is in greater abundance, with a pronounced tendency to rapid cell division. The mucous membrane of the bronchial tubes is loosely attached to the muscular walls, and the submucous tissue contains an abundance of blood-vessels but loosely confined in its meshes. The alveoli of the lungs are small, with comparatively thick walls, and a rapidly proliferating epithelium. The rich distribution of vessels is but loosely restrained in the undeveloped tissue, and hence easily becomes distended and tortutous, and liable to encroach upon the lumen of the alveoli. The absorbents act slowly, the rich blood supply playing the most important part. This loose construction and richness in capillaries render such subjects peculiarly liable to congestions of the bronchial tubes and lungs from atmospheric changes, excessive humidity, or an irritating character of the inspired air. The rapid cell proliferation tends to occlude the smaller bronchial tubes, producing collapse of groups of air-vesicles to which they lead (atelectasia), aggravated by the

atmospheric pressure from without, which finds but little resistance in the elastic walls of the thorax. During the first two or three years of childhood, while the lungs still partake of this embryonal type, an inflammation of the smallest bronchial tubes rarely if ever fails to extend to the alveoli and the lung tissue, causing a broncho-pneumonia; and the existence of a true capillary bronchitis without pulmonary involvement, in view of the above anatomical peculiarities, may well be questioned.

The rate and rhythm of respiration in infancy and early childhood are very irregular, and variations in them may occur apart from any affection of the respiratory organs. They are, therefore, of less diagnostic and prognostic significance than in the adult. The type of respiration, however, is of more importance. This is normally almost entirely diaphragmatic or abdominal, and any marked or persistent variation from this points conclusively to some interference with normal respiration. It is also evident, from the foregoing, that the amount of dyspnœa in a child cannot be taken as an index of the extent of an existing lesion.

Not until after the fifth year do the lungs assume the adult type, and up to that time we find that children have not the power of voluntarily expelling excessive secretion formed during an attack of inflammation of the respiratory tract. This renders such an attack more serious, at the same time that it calls for special care in the treatment, especially in the way of too energetically hastening by remedies the process of resolution after the period of congestion. In infancy and decrepit old age we may drown the patient by filling the air-passages with secretion too abundant to be gotten rid of.

In applying the various methods of physical diagnosis to the investigation of the diseases of the respiratory organs we will also have to bear in mind the peculiarities to which reference has been made. On account of the small size of the parts an examination of the naso-pharynx with the mirror for suspected adenoid growths or enlargements will generally prove unsatisfactory, and it is preferable at once to introduce the forefinger into the mouth, behind the soft palate, and allow it to sweep over the pharyngeal vault. This can be done rapidly without

much discomfort to the little patient, and with satisfactory results for ourselves.

The thoracic walls of the young child being thin, vibrations in them are so pronounced that carefully regulated palpation is often sufficient to detect what process is going on within. By light, medium, or deep palpation, we can recognize the coarse sonorous *râles* of chronic bronchitis, the pleuritic friction sound, and sometimes be able to distinguish between pleuritic effusion and pulmonary consolidation. Palpation is often preferable to auscultation, enabling us to localize the orgin of vibrations and sounds more clearly than, or at least as clearly as, with the stethoscope, to the use of which children usually at first strenuously object. In practicing percussion, the resonance of the chest-walls is again to be taken into account. A light stroke will give us clearer information than a heavier one, since the latter will bring out sounds from other parts of the chest than those directly under the finger.

For the same reason the results of auscultation, rapid and intermittent as it must be in the case of a crying-child, are apt to be less absolutely correct than in the case of an adult, the coarser sounds, as of the trachea and bronchi, tending to mask the finer vibrations. Frequently, however, the very act of crying by the child may assist us in our diagnosis by auscultation, provided due allowance be made for the exaggeration of the sounds both in extent and in intensity.

Finally, in locating the respiratory organs in the child, we must remember that the trachea lies higher than in the adult, and that the lungs, owing to the encroachment of the comparatively large liver on the right, present their lower anterior border at the fourth or fifth rib on that side, and on the left at the margin of the sixth. Posteriorly, the lower border extends to the eleventh rib on the right, and as far as the twelfth on the left side.

There are other variations from the adult type of which mention might be made, but as they are rather of interest than of practical importance they shall be omitted here, those already given being the only ones necessary to be kept in view when treating diseases of the respiratory organs in infants and children.

SLEEP.*

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WHAT is Sleep? What causes Sleep? What prevents Sleep? And, How shall the causes that prevent Sleep be removed? Four conundrums easier to propound than to answer. Let us consider them briefly seriatim.

First, What is Sleep? A most familiar affection of the nervous system that defies satisfactory explanation or definition. We know that without it we die. In early English history criminals condemned to death by being prevented from sleeping died soon in a raving insane condition. Physiologists content themselves by enumerating the physical phenomena that attend sleep when they do not, like Dalton, evade the subject entirely. They speak of the circumstances under which it occurs, the effects of it on the body, the depth of it, etc., without defining it at all. Psychologists, like physiologists, either evade a definition, description or explanation of this mystery, as does Hamilton, or they content themselves with a consideration of the mental phenomena attending it. Haven summarizes these phenomena as loss of emotional consciousness, loss of voluntary power over the body, and loss of voluntary power over the operations of the mind.

I find nowhere a presumption to define sleep any more than physicists define the article that passes over the wire to your phone, or flashes from New York to San Francisco. Aldrich says, "What probing deep has ever solved the mystery of sleep?" As "fools rush in where angels fear to tread," the poets settle the matter of the definition of sleep by personifying it, and with this it seems we must be content. They call it "Tired nature's sweet restorer, balmy sleep;" "Death's beautiful twin brother;" "Life's nurse sent from heaven to create us

* Presented at the request of the Lehigh Valley Medical Association.

anew from day to day;" "Best friend of frail humanity, and, like all other friends, best estimated in its loss."

Our *second* question, What causes Sleep? like the first, unfortunately we cannot answer with certainty. Some very plausible theories have been advanced, even in diametric opposition, by equally great men. Our own Talcott and many other authorities claim it is due to anæmia of the brain; some of the best experimenters and authorities claim it is due to hyperæmia of the brain—at least to an increased quantity of the blood in the veins of the pia mater, which exerts a certain amount of pressure on the grey matter of the brain; and the latest theorists hold that the blood-pressure is altered differently in the same case under different circumstances, and that sleep causes this phenomenon instead of resulting from it. After all, anæmia or hyperæmia probably bears the same relation to sleep that bacteria do to disease, *i.e.*, *attending* sleep. It does seem rather idle to investigate whether anæmia or hyperæmia causes sleep, for, on the face of it, the blood-vessels would seem rather to have been made for the brain than the brain for the blood-vessels.

Waste products, being the result of the exercise of the nervous system, are attributed by some to be the cause of sleep; and, again, the want of oxygen is another theory, and so on; but no theory—whether mechanical, dynamical or chemical—can be accepted as settling the subtle problem of the immediate cause of sleep. We know that it is a necessary phenomenon in the economy of nature, and think we can explain the need for it by fatigue, whether of body or mind or both. But, on the other hand, as if to mystify us more, those sluggish natures which allow nothing to excite or call into action the nervous system sleep from precisely the opposite cause—not the exhaustion of nervous activity, but its absolute non-existence.

We do know some conditions that seem to be conducive to sleep. A mind at peace with self and the world, a healthy body, youth, full habit and lymphatic temperament are natural conditions in which sleep is normal. Like eating, drinking, and the performance of some other functions, "going to sleep" is to some extent voluntary. Therefore, we being willing, by

cessation of labor and the removal of disturbing agencies, by assuming the horizontal position, and with the favoring help of darkness, Morpheus, under ordinary circumstances, readily accepts the invitation.

We are also passively susceptible to external influences that appear to bear a causative relation—apart from hypnotic influence that one person may be able to exert on another—as gentle massage, rocking, singing, or humming drowsily, the art of the gentle old nurse; and any monotonous sounds, like the rattle of wagons or cars, the roar of waterfalls or surging splash of the ocean surf, or even a soporific sermon. With the physiologically active agents that can produce sleep artificially—the long list of hypnotics and narcotics that is daily growing larger—must be classed extreme cold, excessive heat, and alcohol.

Thirdly, What causes prevent Sleep? This problem is not only subtle because difficult to answer, but also difficult to answer because so very prolific in possible remote causes. As we have seen we do not know with certainty the causes of sleep, how can we know the inherent causes that prevent sleep? *Vice versâ*, if we could know the immediate causes preventing sleep, why should we not know the causes of sleep? As we know some conducements, favoring and assisting causes, in fact many mechanical, chemical and dynamic remote causes of sleep, so we do know many remote causes of sleeplessness.

Sleeplessness is not always an indication of disease. It may be caused by external interrupting causes, as noises of various kinds; also by anything that would be at variance with the habit, or an abuse of health—as protracted overuse of the brain, overanxiety of mind, and unwise worrying regarding the past or future. In a general way, also, pains of all kinds; indeed, anything making unaccustomed impressions upon the nervous system. These are a few of the many causes of sleeplessness in health. As one would suppose, therefore, it is not a diseased condition. When associated with disease it is simply a concomitant, rather even a symptom, of disease.

We have said that possibly anæmia, and it might be that hyperæmia, is the cause of sleep. Well, possibly anæmia or hy-

peræmia is the cause of sleeplessness as well, and elaborate papers have been based upon this theory.

The remote causes of sleeplessness include the bilious and nervous temperaments, and an innumerable array of diseases, general as well as localized, of the body as well as the brain. Its presence or absence, its severity or persistence, is no guide to the diagnosis of the disturbance upon which it depends, for in such important lesions as organic diseases of the brain it may be absent, while it is a frequent and obstinate symptom in such prevalent affections as the functional derangements of digestion. Again, a disease may have it in a pronounced form in one patient, in a modified degree in a second, and not at all in a third; and in the same disease in the same patient it may be present at one time and not at another. Laurence Sterne made Tristram Shandy express a wish to "write a chapter on sleep; it is a fine subject," he says; and so it is a "fine subject," and for poetic effusiveness glorious, because the state is unhampered by an excess of knowledge regarding "The Mystery of Folded Sleep."

The *last proposition* suggested is regarding a removal of the causes preventing sleep. We do not know what sleep is, we do not know what causes sleep, and we do not know what causes prevent sleep. It is fair to question whether what we know about the cure of sleeplessness can be very trustworthy or worth recording. Fortunately, prescribing for a disease or symptom does not presuppose a comprehension of its inherent qualities any more than does the modification or the use of a natural law presuppose its comprehension. What we know about the inherent properties of electricity fortunately has nothing to do with our electric light, telephone or telegraph, and what we don't know about it has no bearing on the mathematically accurate facts in the thousands of volumes that bear on that subject. Consequently, MacFarlane's 300 octavo pages on the "Therapeutics of Insomnia" express only a minute portion of what we can and should know in this respect.

Sleep has been called the "chiefest thing in physic," and deserves more careful study than is possible within the scope of such a paper. Question—How shall the causes that prevent

Sleep be removed? The Irishman's answer "remove them" holds good to a great extent here: many of the remote causes can be removed by simply knowing them. They are very numerous, and we have tried only to classify them in our previous paragraph. Perfect living of our daily lives will frequently be all that is required to insure sweet sleep. To relieve the hyperæmia of the brain that causes sleeplessness, fill the stomach with solid food that is coarse and plain, so as to encourage the departure of the blood from the brain. For the excessive anæmia, and nerve irritability causing anæmia of the brain, give liquid food, as hot milk, beef-tea and broths about an hour before sleep is intended—to nourish the blood and increase its quality and quantity.

Another method to induce sleep is massage, properly done according to Dr. Weir Mitchell's instructions. The indications are, sedentary habits, imperfect circulation, digestion and assimilation. Warm baths, especially at night, fresh air, comfortable beds, sufficient and proper bedclothing (not too much), and proper position in bed, are among the simple means for inducing sleep.

The medicines for inducing sleep might be divided into classes as numerous as there are diseases in which it occurs, it being merely a concomitant and very erratic symptom. Like all other symptoms, it is most successfully dealt with from a therapeutic standpoint by prescribing for the "totality of symptoms," and not by giving the insomnia undue prominence. Sleeplessness is a common symptom, a large percentage of all diseases having it, more than a hundred remedies possessing it prominently. According to Hahnemann's rule that "uncommon and peculiar symptoms" be the guide to the remedy, this symptom can very rarely, therefore, be an important guide. It does become more important as we differentiate the peculiar forms and modalities of sleep—in other words, only in so far as sleep becomes a "peculiar" symptom in the case, and, on the other hand, as sleeplessness becomes a characteristic symptom in the pathogenesy of the remedy.

Arum, bell., cact., cham., coff., cyprip., nux v., op., stram., staph. and sul. have this symptom pre-eminently as a guiding

symptom. Acon., agnus, arn., ast. r., benz. ac., bry., camph., canth., cina, cinch., clem., coca, coccion., coloc., cuprum, dig., dros., ferr. ph., gels., glon., graph., guaiac., hell., hyos., ign., iod., ipec., iris, kali bi., kali c., kreo., lach., lycop., magn. c., med., mez., natr. m., natr. s., nux m., phos., phos. ac., plumb., podo., rhus, sec., senecio, sep., stram., tarant., thuja and vinca minor—all do also lay claim to this symptom as a characteristic.

These remedies have also been classed variously according to the pathological significance of the sleeplessness, or according to the pathological condition the insomnia accompanies. As, for example, a class affecting the vaso-motor system, a class acting on the heart regulating circulation, a large class acting on the various organs of the body, and a class acting on the cerebro-spinal system. There are special classes of remedies suggested by special diseases, like nux vom., phos. (*θ*), avena sativa and macrotin in the opium habit and drunkards. It is not within the scope of this paper to review and differentiate the characteristic symptoms and conditions of these many remedies, and those of a score or more prominent ones unnamed.

After following that will-o'-the-wisp labelled "specific," like the credulous Ponce de Leon in search of the fountain of youth, led by enthusiastic prescribers who would not dare to stand up here now and in their hypocrisy or ignorance say, "Of course not;" and—tell it quietly—induced by homœopathic advertisements in homœopathic journals, price-lists and catalogues, to buy Passiflora *θ* in bulk, "much cheaper by the pound;" after prescribing coff., ign. and bell. like mad, I humbly acknowledge that, after having had this experience, I wish to be put on record that, after fifteen years of vacillation, I am able to comprehend this one fact fully, and may I be accused of the ignorance and hypocrisy referred to if I speak of specific homœopathic hypnotics. Change the condition of your patient from the abnormal to normal as far as possible by hygienic and dietetic means and select your remedy according to Hahnemann's instructions, and the best possible results will ensue.

Lastly, a word, and only one, regarding narcotics, hypnotics and overpowering drugs. The physician who will prescribe

sulphonal, trional, paraldehyde, hyoscine, chloralamid, bromides, chloral, and especially opium, to a patient, without any consideration of the case more than that it is one of insomnia, is a poor physician, and certainly no homœopath. Use them as sparingly as chloroform and ether—admit that you have tried honestly, faithfully and with good judgment, and that you are unable to do better in selecting the homœopathic remedy; don't be afraid to learn the dosage of hypnotics, as well as their objectionable effects, in detail—and we believe Hahnemann would agree that we were doing our best, and the best for sick and sleepless humanity, and that, like chloroform and ether, all of them should have their undisputed individual places of importance.

APPENDIX.

REPORT OF THE BOARD OF CENSORS.

The Board of Censors examined into the professional standing of the following applicants for membership and recommended that they be elected. On motion, the recommendations of the Censors were adopted, and the candidates balloted for and elected :

T. Louis Adams, M.D., . .	1831 Chestnut St., Phila.
Alex. B. Arthur, M.D., . .	Philadelphia.
Jerome L. Artz, M.D., . .	Camden, N. J.
Daniel G. Baker, M.D., . .	1706 N. 19th St., Phila.
Edward P. Clark, M.D., . .	Connellsville.
S. G. Godshall, M.D., . .	Edge Hill.
D. W. Harner, M.D., . .	New Holland.
Lewis H. Hendrixson, M.D., .	New Holland.
Bayard Knerr, M.D., . .	12th and Spruce Sts., Phila.
Robert Wilkie Martin, M.D., .	1831 Chestnut St., Phila.
H. H. Wilford, M.D., . .	Bangor.

ADDENDUM TO REPORT OF HAHNEMANN MONUMENT COMMITTEE.

The Committee on Hahnemann Monument reported having secured subscriptions for the completion of the monument amounting to $2359.50. This amount is in addition to former amounts obtained in previous year. (See report of Committee on page 30.)

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